

Two Sandia Projects Are Winners in R&D Competition

Last week *Research & Development* magazine, sponsor of an annual international search for the top 100 technological innovations of the previous year, announced that two Sandia projects were among its 1987 I-R 100 Award winners. Glenn Kuswa, manager of Technology Transfer and Management Dept. 4030, accepted the Labs awards in ceremonies at Chicago's Museum of Science & Industry.

Sandia award winners are an External Micro-ion Beam Analysis (X-MIBA) system, developed by Barney Doyle and Norman Wing (both 1111); and the Rapid Reduction of Nitrogen Oxides (RAPRENOx) process developed by Bob Perry (formerly 8353, now president and owner of Technor in Livermore).

I-R 100 awards have gone to eight other Sandia innovations in the past (see "Past Winners"); six were garnered last year.

Nondestructive Analysis Technique

The External Micro-ion Beam Analysis system developed by Barney Doyle and Norman Wing is an
(Continued on Page Four)

Bond Drive Update

Dick Craner (3180), 1987 Savings Bond Chairman, reports some updated results on Bond participation (slightly different from those reported by LAB NEWS, Sept. 11, 1987).

Five directorates are now recorded at 100 percent participation (the addition appears in bold-face type): 400, **1200**, 1400, 2900, and 6500.

The "Almost-100" group (98 percent or better) includes **1800**, 2100, 2500, 2800, 3500, **5100**, **5200**, 6200, 6300, 7100, 7200, 7500, **9100**, and 9200.

Benjamin Revisits Trinity

Of the dozens of Sandians who were actually on-site at Trinity during the first atomic bomb test, only one, Bill Thomas (7251), is still on-roll.

One other, who retired in June, has the distinction of having recently revisited the bunker where he spent the night of July 16, 1945. This is his story.

It was early 1944 when the Army put Sgt. Technician Ben Benjamin into the Manhattan Engineer District in Los Alamos. He worked with, among other notables, Bill Penny, who was later Sir William and head of Great Britain's AWRE (Atomic Weapons Research Establishment).

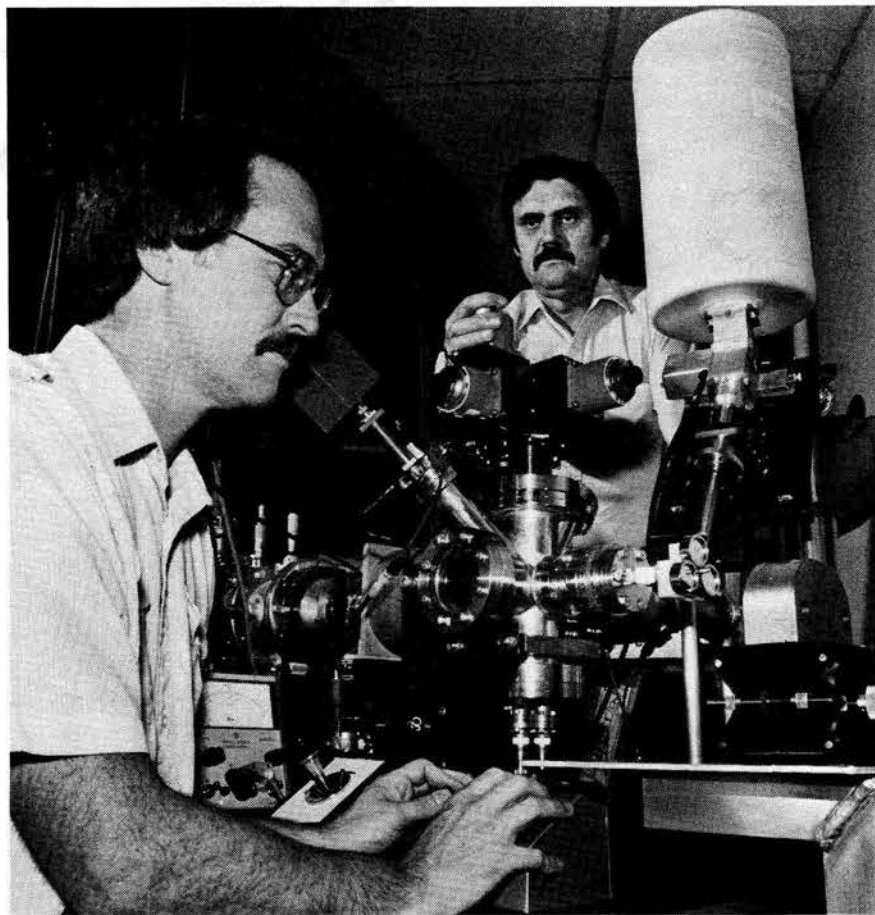
Ben's specialty was precision optics — "grinding lenses, in other words," he says. He was supposed to work on prisms to ensure that the detonators on Fat Man were synchronized, a task that demanded rotating prism cameras.

But, as it turned out, anyone who could develop film was in demand, and Ben ended up in technical photography under physicist Julian Mack, whose group was assigned the task of measuring the output from the first nuclear device.

Ben and Julian were at the "10,000-yard West" station during the Trinity shot (Oppenheimer, Groves, and other VIPs were at the "10,000-yard South" station). "No one could know how bright the thing was going to be — if it went off at all," Ben points out. "So we set some cameras at slow speeds, some fast or stopped way down. We had still and motion picture coverage plus time-resolved spectrographs, so we felt we could get some pictures whatever the brightness."

Slept from 3 to 4

"The shot was set for 3 a.m. Well, we'd worked all night the night before and that night too, so we were really tired. Then a rain came, and all the cir-



BARNEY DOYLE (left) and Norman Wing (both 1111) received an I-R 100 award for development of X-MIBA (shown here), an instrument for probing the near-surface region of samples of matter.

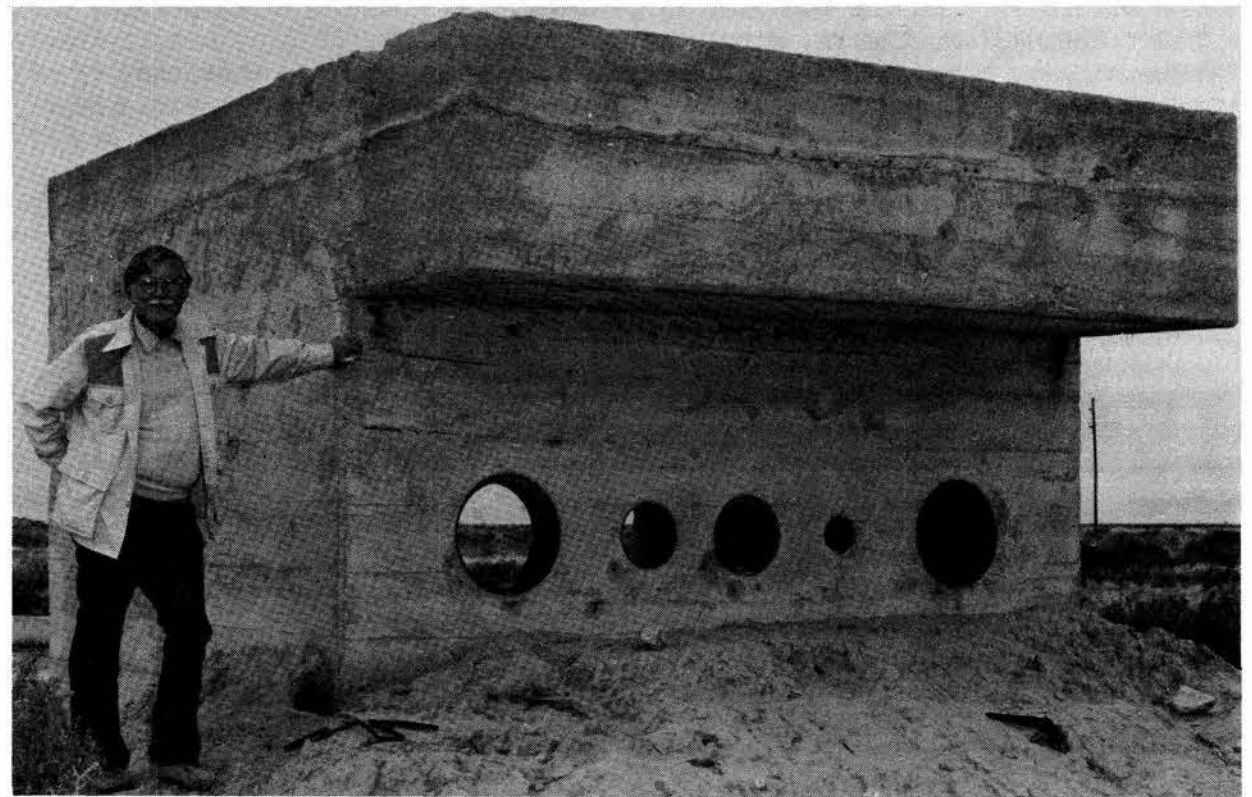


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SANDIA NATIONAL LABORATORIES

SEPTEMBER 25, 1987



BEFORE HE RETIRED from Field Test after more than 38 years of Sandia service, Ben Benjamin returned to Trinity Site during a Sandia penetrator experiment on White Sands Missile Range. He was surprised to learn that "10,000-yards West," the bunker where he spent the night of July 15, 1945 (see story), was still standing more than 40 years later. "It had turned out that we didn't need so much protection 10,000 yards out — this thick concrete was an 'overkill' — so I was on top of the bunker with my boss and an array of tracking cameras during the shot," he recalls. "The fixed cameras and a time-resolved spectrograph I helped to develop were looking through the portholes in the bunker."

cuits shorted out. We couldn't shoot, so we slept from 3 to 4. But the rain stopped and a breeze came up, so the circuits were working again.

"The concept of a FPF [full-power, full-frequency] dry run hadn't been developed yet, so we were going to have to operate the cameras one by one, not all at once — the conductors were too small and the currents too high.

"Julian and I were listening to the countdown by radio, and I was helping him operate a tracking mount holding four motion-picture cameras. We

planned to follow the fireball with them."

The shot went off at 5:29 Mountain War Time.

"Silently, the fireball expanded into the night sky," Ben recalls. "Several seconds passed, and all you could hear was the sound of the cameras. I said, 'Wow! It's beautiful!' or words to that effect.

"Julian answered, 'No, it's terrible!'

"At about that time, the junction box that supplied power to the cameras overheated, thanks to its current load, and burst into flame. Then the insula-

(Continued on Page Five)

Antojitos

Why You Couldn't Find a Director Last Week Since 1959 Sandia has staged 22 Large Staff Conferences, usually at Bishop's Lodge. The one held last week (known as Wheel Alignment XXII by insiders), like its predecessors, served some important functions. Said EVP Orval Jones, "It's a good opportunity for all of us to focus on issues simultaneously, and, I'm pleased to note, with a high degree of candor. It's not a decision-making conference -- although I remember years ago when someone suggested that, given a tight budget, Tonopah Test Range was a luxury we could do without. But the Large Staff consensus was that 'even in tight times, we need to keep our testing facilities intact.' And, in hindsight, that turns out to have been a wise decision.

"It's also an opportunity," Orval continued, "for all of us to make some personal contacts -- over the dinner table, for example -- that give us a better insight into directors and VPs we don't have a chance to work with on a day-to-day basis." (Fortuitously, the new Administration VP, Dennis Roth, could attend part of the conference.)

"The most important function is that it provides an opportunity to examine the larger issues that concern all of Sandia, not just those that concern an individual organization," commented President Welber. "It's an ideal forum to exchange ideas -- and, I hope, we all came away with a better concept of the actions we need to take to make Sandia what it should be in the 1990s."

Those actions, of course, must be unified and cohesive -- and aimed in precisely the right direction. Needless to say, we need no one at Sandia like the knight in this somewhat shopworn "medieval morality tale": The knight returned to the castle at twilight in a state of total disarray -- dented armor, helmet falling off, face bloody, horse crippled, the knight himself about to fall off the limping horse. "What hath befallen you, Sir Knight?" asked the lord of the castle.

"Oh, sire," the knight answered, "I have been laboring in your service, plundering and pillaging your enemies in the East."

"You've what?" cried the lord. "I don't have any enemies in the East."

"Oh," said the knight. "Well, I think you do now."

* * *

Pedal Louder, Bikers! Bob Reed (5166) walks to work via the Gibson and Zia gates (south of Wherry School). He shares the path with the bikers -- "and therein lies my problem," he notes. "Help prevent a heart attack (not theirs, mine)," he pleads. "I try to stay out of the bikers' way, but I'd really appreciate bikers' announcing that they're passing me by saying something -- 'On your left' as skiers do would be fine. So would a simple 'Good afternoon.' Even a 'Get out of the way' would work. And, of course, a bell or horn would do it."

* * *

Antidote to the Missing Property Report: "Whoever found and returned my personal check made out for cash (and endorsed to boot) that I lost on the way to Finance, thank you very, very much!" Signed, Diana Sorenson, 1830. Glad to print it for you, Diana, but one tip -- catch the crime prevention presentation next month.

* * *

Sandia Management Motto: Speak softly but carry a large staff. ●BH



NEW VP 3000 Dennis Roth attended part of the Large Staff Conference last week, then returned to Washington to end his tour of duty with AT&T Federal Systems. "I'm excited about my new post, and I'm impressed by the Sandians I've met," he notes. "I'm also delighted to be moving to Albuquerque." He expects to be at Sandia early next month.

Roth Named VP 3000

Dennis Roth, currently Marketing Staff Director of AT&T Federal Systems in Washington, D.C., will become Vice-President of Administration 3000 on Oct. 1.

Roth joined AT&T Operations in New York City in 1963 after serving with the U.S. Air Force. He worked in Accounts & Finance from 1965 to 1969, where he analyzed, designed, and programmed a variety of information systems in support of AT&T's financial and engineering organizations.

In 1969 he was appointed Data Systems Project supervisor and was responsible for nationwide programming support software. He directed the Mt. Kisco Data Processing Operation in support of the National Engineering organization in 1971.

In 1972 he became District Data Systems Manager at the White Plains Data Processing Center, managing the corporate payroll, customer billing, corporate financial books, and engineering planning systems. In 1973 he directed the Upstate New York Plant Operations District. He went to the Business Research organization in 1975, where he directed special econometric modeling to explore new pricing strategies and methodologies.

In 1977 Roth directed the AT&T Systems and Technical Education Center, which is responsible for designing and delivering company-wide training for systems analysts, designers, programmers, and data processing operations personnel.

He was General Data Systems Manager in 1978, with responsibility for the development, implementation, and maintenance of all design and programming methods, data processing procedures, application development productivity measurements and standards, and operating system/support software at seven major data centers across the country.

In 1980 he directed the AT&T Marketing Information Systems organization, which supports strategic planning, market management, account management, inventory control, technical support, compensation, information centers, and automated office systems. In 1983 he headed information systems planning, systems budgeting, application development, organization design, nationwide methods/procedures, force management, market research, and training.

He was AT&T Regional Manager in western Pennsylvania in 1985, directing all National Account sales strategies, tactics and daily sales, information technology, and communications services.

He has a BS in EE and an MA in industrial management from the Polytechnic Institute of New York and a Doctorate of Law from Seton Hall University in New Jersey. He has done graduate work at Columbia in market management, at NYU in economics, and at Rutgers in advanced management.

Off the job, he enjoys jogging, fishing, and tennis. He and his wife Sharon have three children.

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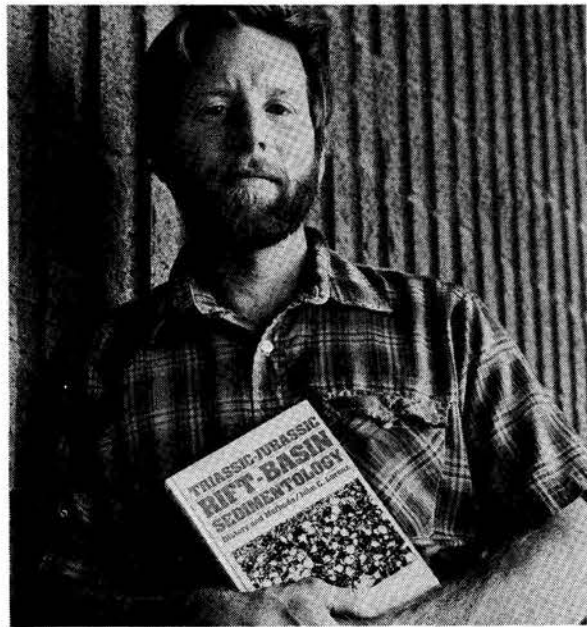
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JOHN LORENZ (6253) is the author of a recently-published geology textbook, *Triassic-Jurassic Rift-Basin Sedimentology*. The book details historical and modern interpretations of sediment layers in geologic strata in the Hartford Basin (located in Conn. and Mass.) and in similar strata in an area of western Europe that's a mirror image of the Basin. Published by Van Nostrand-Reinhold, the text is available by special order at Albuquerque book stores.

Administrative Directorate Created

VP John Crawford (8000) has announced a reorganization at Sandia Livermore that creates a fifth directorate — Administrative Directorate 8500 — with Paul Brewer (8260) as the new director. The reorganization is effective Oct. 1.

“The change combines administrative functions in one line organization, with the director responsible for all the details and policies relating to administration,” says John. “I’ve thought about this since the day I arrived; in fact, I discussed it with Dick Claassen before he left in June.

“The reorganization changes other directorates as well,” John continues. “For instance, Ron Detry [8200] will have responsibility for all direct support functions. With the addition of the Test and Model Labs Department [formerly 8180], Ron will now be responsible for analytic as well as engineering support services.

“Also, Electronic Instrumentation Department 8460 will move to Gene Ives’ Weapon Development Directorate,” notes John. “This gives 8100 a self-contained weapon development group with all weapons activities and telemetry functions in one place.”

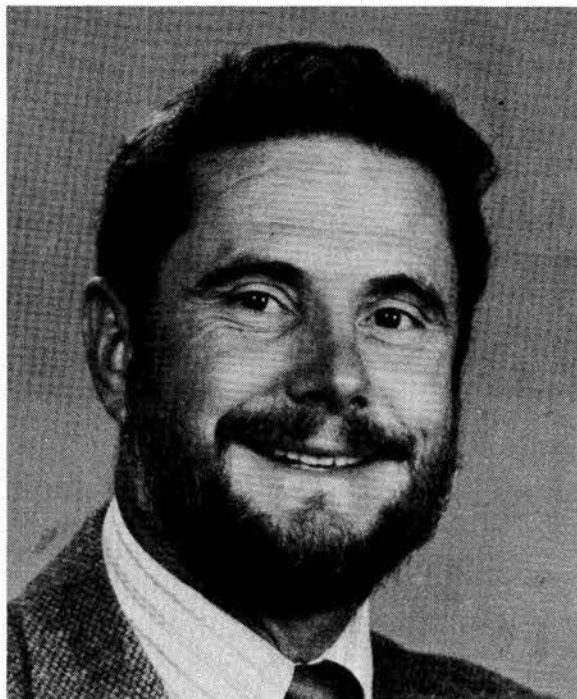
New Director Knows SNLA, SNLL

Commenting on his selection of Paul Brewer as the new director of 8500, John says, “Paul comes highly recommended by a lot of people at the Labs — both here at Livermore and in Albuquerque. Because he has served in most administrative organizations at the two locations, he’s well-qualified to handle the breadth of administrative issues faced at both. I’m confident he’ll do a fine job of coordinating work on the administrative side of the house.”

One of the goals of the new directorate will be “to help people accomplish the Labs’ technical mission,” says Paul. “As a service organization, our role is to help everyone get the job done. I hope this group is always viewed as a vital member of the Labs’ team. It should work with the technical staff as an equal partner and provide the best support possible.”

‘Dream Come True’

The new organization is “a dream come true,” says Paul. “I really believe what John has said about



PAUL BREWER (8500)

the advantages of centering administrative activities in one organization. It will allow a closer working relationship with our counterparts in Albuquerque. I’ve grown up with many of those people; they’re career-long friends, so we should interact very well with SNLA. And my involvement with most of the indirect support functions at both Sandia locations over the years should help pull things together administratively,” Paul concludes.

Paul joined Sandia in August 1966 and first worked in employee benefits. Following that, he spent one year in personnel systems, then in March 1969 was promoted to supervisor of accounts payable. He first came to Livermore in the spring of 1979, when he was promoted from Programmatic Budget Division supervisor to manager of the Personnel and

Accounting Department. In August 1982 he returned to Albuquerque as manager of the Budget and Financial Planning Department. He stayed in that job until his return to Livermore as head of the Administrative Services Department in January 1985.

Paul received BS and MS degrees in business administration from UNM. He also spent three years in the Navy, where his last assignment was at Sandia Base (now Kirtland) with the Navy Weapons Division.

Paul’s hobbies are saltwater fishing off the California coast and freshwater fishing in Colorado; he also enjoys vegetable and flower gardening at his home in San Ramon. He recently purchased some property on the northern California coast, where he plans to build a vacation home.

Take Note

Five people from Advance Security Inc., Sandia Livermore’s contract security firm, placed in DOE’s recent national Small Arms Tournament at the Central Training Academy at Kirtland Air Force Base in Albuquerque. Winners included Dennis Steinhagen, captain of the first-place 4-man Marksman Team; Mark Lindstrom, winner of the Combat Weapons Aggregate Award and Combat Handgun Award; and Jerry Weber, Tim Johnson, and Robert Allen, all members of the first-place 4-man Marksman Team. Some 300 DOE and contract security professionals nationwide participated in the competition and training conference hosted by the Central Training Academy.

Participants competed in tactical shooting ability, physical conditioning, decision-making under stress, knowledge and employment of DOE security policies and tactics, plus the National Rifle Association-sanctioned Practical Police Course for individuals and teams.



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Add Microscapes to Your Landscapes

Exhibit Details Hidden Art Of High Technology

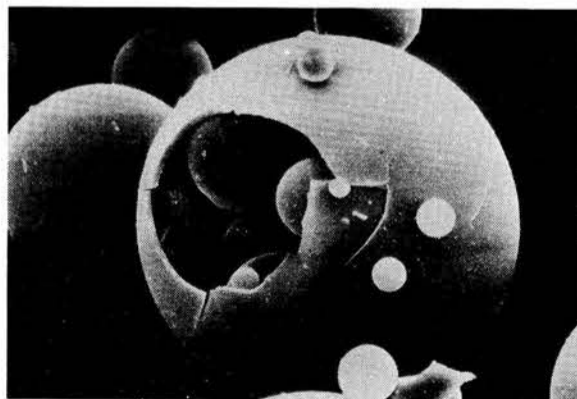
If you’re planning to do some aspen-viewing in northern New Mexico next month, you may want to add another item to the agenda: a stop at the Bradbury Science Center in Los Alamos for a look at a photography exhibit exploring the link between high technology and art.

“Microscapes: The Hidden Art of High Technology,” a show featuring 50 photos (both color and black-and-white), will be displayed at the Center from Oct. 7 through Nov. 21. Produced and provided as a public service by AT&T, the show focuses on seldom-seen advanced developments in microelectronics and lightwave communication.

It includes close-up looks at microprocessor chips, glass fibers, crystals, magnetic bubbles, and gas flows — magnified up to 67,000 times for optical images and up to a billion times for computer-created images. Some of the photos were shot at exposure speeds as fast as 1/720,000th of a second.

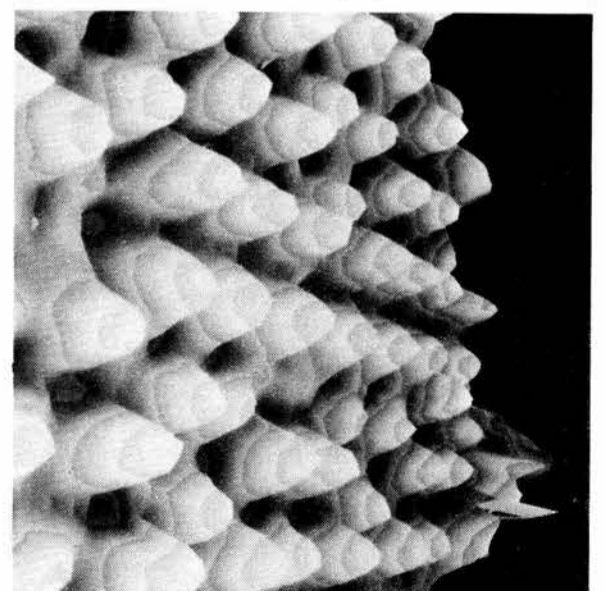
A show highlight is a first-time-ever (according to AT&T) photo of atoms on silicon — shown here, along with another from the exhibit. The image, magnified a billion times, was made with a scanning tunneling microscope.

The exhibit, currently on a three-year tour of



HOLLOW GLASS BEADS — and beads within beads — are added to epoxy resins to strengthen them when they are molded into printed-circuit boards. This scanning electric micrograph, about 3300X, was made for a study of the size distribution of beads and its effect on the characteristics of circuit boards. (Photographer: Robert Woods; AT&T © 1986)

the U.S. under the auspices of the Association of Science-Technology Centers, has appeared at more than 20 museums, including Chicago’s Museum of Science and Industry and the National Academy of Sciences in Washington, D.C.



MEASURING LESS THAN 1/100,000,000 of an inch, the tooth-like objects in this micrograph are individual atoms (enlarged more than a billion times) on a silicon crystal. The image was made by a scanning tunneling microscope, which collects digital information plotted by a computer. (Photographer: Russell Becker; AT&T © 1986)

I-R 100 Awards

instrument for probing the near-surface region of samples of matter. It's a nondestructive means for providing concentration profiles of elements in sample materials in any form — solid, liquid, gas, or plasma — and in three dimensions.

"A primary advantage of X-MIBA is its ability to work in an ambient atmosphere," says Norman. "Other techniques used for qualitative depth profiling require the sample to be placed in a relatively high vacuum. However, some samples are too large for convenient placement in a vacuum; others, such as gases or liquids are unsuitable for in-vacuo analysis. X-MIBA takes care of the problem."

X-MIBA uses a microfocused accelerated beam of light ions to do its analysis work. The beam, focused with a magnetic quadrupole doublet lens, is extracted from the vacuum system of a charged-particle accelerator by transmission through a thin foil — hence the term "External."

Ions in the beam collide with atoms in the sample material; the resulting nuclear interactions are detected back inside the vacuum system, a location completely apart from the sample. Analysis of the collision reveals atom composition — a profile — of the material.

This novel approach — use of an *ex-vacuo* ion beam in combination with in-vacuo detection — allows the analysis to be done quickly without destroying or damaging the sample, according to Barney Doyle.

X-MIBA was developed originally to monitor the thickness of special coatings used on tokamak fusion reactor components without interrupting their use, but Barney believes the system will find many research and industrial applications.

"The capability of nondestructive 3-D depth-profile analysis of virtually every element in the periodic table, coupled with the ability to examine any state of matter, is unique," he says. "X-MIBA could become a very effective quality assurance tool."

NO_x: Major Pollution Contributors

RAPRENO_x, announced late last year by Sandia (see LAB NEWS, Dec. 19, 1986; and Jan. 16, 1987), is a chemical process for removing nitrogen oxides (NO_x) from the exhaust gases of engines, furnaces, chemical reactors, and other devices. Primary use for the process is the removal of NO_x from the exhaust gases of diesel and spark-ignition engines.

Nitrogen oxides are major contributors to smog and acid rain, particularly in the western U.S. NO_x removal could be an important step in controlling these atmospheric pollutants.

RAPRENO_x uses cyanuric acid, a nontoxic chemical often used as a chlorine stabilizer in swimming pool water. The acid is inserted into the exhaust stream, and the exhaust passes over it; the process converts the NO_x into molecular nitrogen and other gases.

Last year Bob and Dennis Siebers (8362) used the relatively inexpensive RAPRENO_x method in lab tests to remove more than 99 percent of the NO_x from the exhaust of a small diesel engine.

Bob left Sandia early this year to form his own company, Technor, to develop RAPRENO_x commercially. DOE waived patent rights (two patents are pending) to Bob to speed commercialization. He also has received a research grant from DOE and is allowed continued use of Sandia facilities as a visiting scientist. "Bob's establishment of Technor is an example of technology transfer at its finest," comments Glenn Kuswa.

X-MIBA and RAPRENO_x are currently featured — with other products and processes developed at several national labs — in a DOE exhibit at the Museum of Science & Industry. The exhibit will continue through Oct. 4. •PW/Larry Perrine (3161)



McGRUFF the Crime Dog is just one of the experts in crime prevention who will be at Sandia next month to provide Sandia's women with tips on avoiding violent crime. The program was arranged by Lydia Boye (9114, left) and Goldie Piatt (6440). And behind the McGruff exterior is SSgt. Marco Bañales of KAFB's Crime Prevention office; reach it on 4-4727 if your club or group needs some crime prevention tips.

Be More Safe in an Unsafe Society

On any given weekday, KAFB has about the same population as Carlsbad, the eighth-largest city in the state.

With a crime rate to match? "No, comparatively speaking, we're something of a Sleepy Hollow out here," comments SSgt. Marco Bañales, KAFB's Crime Prevention NCO. "But we're far from crime-free. And those of us who work on the Base are certainly not immune to violent crime."

That fact serves as rationale for a "Personal Protection and Awareness" program for Sandia's female employees and wives of male employees. It's a fitting program for October, Crime Prevention Month across the U.S.

"It's really a myth that we're totally secure out here on the Base," points out Lydia Boye (9114), a member of the Women's Program Committee, one of the two groups sponsoring the personal protection program.

"We know there's no such thing as 100 percent safe, on the Base or anywhere else," adds Goldie Piatt (6440), program coordinator of Sandia's Secretarial Committee, the second sponsor of the event. "But we can learn how to be *more* safe in an unsafe society. That's really what the program is about.

"After all, most of us are married to our daily routines," she continues. "That makes us vulnerable — it's too easy for others to know what we do and when we do it."

"The program we're putting together [the Oct. 1 *Weekly Bulletin* will carry a complete program agen-

Putting Caution in Context

Women in Albuquerque are edgy these days, Lydia Boye (9114) and Goldie Piatt (6440) agree. "The Linda Lee Daniels rape and murder last year, the murder of [Sandian] Gloria Padilla last March, and the abduction and murder of a pregnant woman from the KAFB Hospital this summer — these contribute to the perception that all of us are potential victims," says Lydia.

"But we don't want to overreact," says Goldie. "We don't want to do what one woman did, according to Lynn Rich of the Albuquerque Police Department (and one of the people presenting the crime prevention program next month). The woman felt threatened by a suspicious-looking man at a supermarket meat counter — so she hit him with a rump roast."

da] aims at 'reduction of victimization,' " says Lydia. "Jargon aside, that means looking at our vulnerability to specific crimes and the preventive measures that can reduce that vulnerability — for example, safety tips for walking, driving, at home, on travel."

"In talking with the experts from the local community who will be here next month, I realized that women — and men too, though some of them may have trouble admitting it — are more capable of taking preventive measures than we are of protecting ourselves after we're in trouble," says Goldie.

"So we hope to help women establish some self-confidence in their ability to minimize the risks — and to go on with their lives without undue fear," adds Lydia.

"Some people behave like victims, and that's dangerous," Goldie concludes. "Women, especially, need to be less subservient, more assertive. We think the personal protection and awareness program can help."

Assisting Lydia and Goldie in putting together the program, which will be held in the Technology Transfer Center on Oct. 6, 7, 12, and 13, were Margaret Harvey (3510), head of the Women's Program Committee, and Vicki Black (2310), head of the Secretarial Committee.

Past Winners

Sandia developments and facilities have earned the prestigious I-R 100 Award eight times in the past. They are:

- 1976 — *Hot-air solder leveler*; T. A. Allen (7484) and Bob Sylvester
- 1984 — *TA-23 glass*; Bob Eagan (1840) and Rod Quinn
- 1986 — *High-speed multi-channel data recorder*; Jim Chang
 - *PBFA-II*; Org. 1200 planning team led by Pace VanDevender (1200)
 - *Polysilane self-developing photoresists*; John Zeigler (1812), Wayne Johnson (1126), and Larry Harrah
 - *SANDAC IV* (Sandia Airborne Computer); Charlie Blaine (2336), Paul Pierce (2335), and Charles Borgman (2336)
 - *Carbon-resistance particle analyzer*; Bill Wampler (1112)
 - *X-ray microanalyzer*; Monte Nichols and Dale Boehme (both 8313)

Attention, Retirees with Skills for Sale

Good Ol' RJRS Widening Horizons

During its 13 years of existence, the LAB NEWS's Retiree Job Reference Service has linked dozens of retired skill providers with hundreds, maybe thousands (not everyone signs in so we're not sure), of skill seekers.

But it's time for a change — not a radical one, like eliminating the typists and carpenters, but an expansion. RJRS needs to grow, expand its coverage — which should interest a wide variety of Sandia's retirees.

A little history: LAB NEWS editor John Shunny, himself since retired, began the RJRS with the aim of putting Sandians who needed a roof or a radio repaired in touch with a retiree with the skills to do the job. It's done that — and more or less well, depending on how diligently the retirees have kept their records up to date.

Now, at the request — and complementing the task — of the folks in Tech Transfer, the RJRS needs to be expanded to include not only those with manual skills but also those with mental; that is, those with science and engineering training and talent. While we're at it, we're asking for retirees with other kinds of skills — security work, for example — to register as well.

And we're going to make the RJRS easier for talent seekers to use by grouping similar skills in our binder: If a retiree has several skills, we'll copy the form so it will appear in as many categories as necessary.

Please complete the form carefully and add any information you believe a talent seeker would want to know about. Then mail it to "Div. 3162, Sandia National Labs, Albuquerque 87185" or drop it off in Bldg. 814, Rm. 1.

Remember, even if you're already listed in the RJRS, it's necessary for you to spring for the 22-cent stamp and re-register. All our old records are, like you, retiring.



WE'LL SAVE THE COVER — but the rest of the Retiree Job Reference Service file gets tossed. Retirees are invited to become part of the service, which is now expanding into new areas such as engineering consulting. Janet Walerow (3162) is the LAB NEWS staffer in charge of the RJRS.

Are You Ready, Los Alamos?



The Japanese are experimenting with a novel way of getting rid of snow — melting it with microbes. Toyama, a city in northwestern Japan, has installed a network of pipes underneath a 120-metre stretch of pavement in front of its municipal baseball ground. Water is heated to 60 degrees C by microorganisms before circulating through the pipes, keeping the pavement's surface above freezing point. The microbes are produced by fermenting a mixture of rice bran, chaff, and sawdust in a tank.

New Scientist



DAVE PALMER (3551) assesses the ductility of this feathered apparatus during the Deming Duck Races last month. Dave's entry, N&S Duck (named after sons Nick and Sam), took first in its heat during the Saturday prelims but lost in the quarterfinals on Sunday — "it was fowl play," notes Dave.

Congratulations

To Jane Hepner and Jay Tidmore (3722), married in Las Vegas, Nev., Aug. 13.

To Laurence Ann (7522) and Ken Washington, a son, Terence Ashford, Aug. 14.

To Marybelle Romero (3722) and Ronald Tabet, married in Albuquerque, Aug. 21.

To Lorie and Bob (1141) Caldwell, a daughter, Kelly Ann, Sept. 15.

Sympathy

To Mary Montoya (3745) on the death of her grandmother in Isleta Pueblo, Sept. 11.

(Continued from Page One)

Benjamin at Trinity

tion on some of the conductors started burning. But the cameras kept running long enough that we got all the photos we'd hoped to get."

About 30 seconds after zero time, the shock wave hit. "It was intense, very loud, but not strong enough to knock people down as was reported at 10,000-yards South," Ben continues.

"My immediate thoughts revolved around the triumph of the moment — the great success of the project, the realization that the success could indeed mean the end of the War.

"I've seen many atmospheric shots since then, but, even though most had a greater yield than Trinity [17 kilotons], none were as memorable or as inspiring."

Ben is proud of his collection of Trinity photos, some of which were recorded on cameras he was responsible for. "The photos provided the very first empirical data on nuclear effects — fireball growth, shock wave velocity, thermal radiation. It was a memorable experience for a 22-year-old."

In retirement, Ben is still involved with cameras, but now for artistic rather than scientific reasons. He's rigged a power supply to control a direct-current motor to pull film through an Argus C-3 with a slit behind the lens. If he can match the film speed to the image speed of a moving target, a bike rider, say, he'll have some unique photographs to decorate his new solar home in Sandia Heights.

●BH

RETIREE JOB REFERENCE SERVICE - II
(Please Print All Information)

General Skill Category (circle one or more) Accounting & Financial; Appraisals; Arts, Crafts, Hobbies; Appliance Repair; Communications & Publishing; Home Care, Repair, Upgrade; Personnel; Sales; Science & Engineering; Security; Tutoring, Lessons; Vehicle Repair;

Other _____

Within Category, My Specialty Is _____

Describe That Specialty (if more than one, attach an extra sheet per category)

List Qualifications (education, training, experience, licenses, etc.):

Fee Schedule (optional) _____

Prefer: Consulting _____ Part- or Fulltime Work _____ Either _____

Name _____ **Phone** _____

Address _____ **City/ZIP** _____

Signed _____ **Date** _____

Supervisory Appointments

CARL SMITH to supervisor of Optical Measurements Division 7174, effective June 16.

Carl joined the Labs in February 1960 as a member of the Quality Assurance Division. He went to NTS in 1962 as a member of the Field Test Division. In 1963 he returned to SNLA as a member of Joint Task Force 8 (JTF8), part of the Air Drop Readiness Program. Carl was appointed section supervisor of the Diagnostic Aircraft Division in December 1966.

From 1972 to 1974 he was a test program manager in the Test Program Department. In 1974 he did systems design and test work with the satellite group in the Space Systems Department. In 1975 he joined the Rain Erosion Rocket Program at Wallops Island, Va. In 1976 he returned to Albuquerque and worked with the Safeguards Division, where he developed the interior sensor test lab.

Carl was a Sandia consultant to the U.S. Air Force Electronics Systems Division (ESD) in Boston from 1977 to 1978. In 1979 he rejoined the Safeguards Division in Albuquerque, where he helped design safeguards systems for the U.S. Navy.

From 1985 until his promotion, Carl was Sandia consultant on NATO and Headquarters U.S. European Command (USEUCOM) safeguards systems in Luxembourg and Germany.

He has a BS in physics and math from California State Polytechnic and has done graduate work at UNM and Arizona State University.

In his spare time, Carl enjoys swimming and restoring classic cars. He and his wife Betty live in Las Vegas, Nev. They have five grown children.

* * *

GEORGE MERREN to manager of Quality Assurance Department 7250, effective Aug. 16.

George joined Sandia in August 1958 as a member of the Systems Reliability Division. In 1973 he went to Washington, D.C., on one-year special assignment, working on the Reactor Safety Study, WASH 1400. He joined the W80 Development Division in May 1976. George was promoted to supervisor of the Systems Reliability Division in June 1977. Before coming to Sandia, he was a television engineer in Chicago.

He is a graduate of the DeVry Technical Institute and earned a BS in EE from UNM under Sandia's Educational Aids Program. He is a member of IEEE and the American Society for Quality Control (ASQC).

George enjoys golf and photography in his spare time. He and his wife Alice live in the North Valley. They have three grown sons.



CARL SMITH (7174)



GEORGE MERREN (7250)



CELEBRATING THE CONSTITUTION'S BICENTENNIAL, these youngsters from local day care centers launched red, white, and blue balloons while ringing the bells on their wrists for 200 seconds.

Take Note

The DOE 15th Annual Small Arms Tournament and Training Conference held Aug. 16-21 at DOE's Central Training Academy on KAFB drew 300 participants from across the nation. Sandia Security Inspectors who placed include: Individual Practical Pistol Course (PPC): Gary Malin (3435) — master, and Tommy Serna (3434) — sharpshooter. Four-member PPC — master: Peter Sanchez, Ernest Torres, Keith Chavez, and Gary Malin (all 3435). Two-member PPC — expert: Tommy Serna (3434) and Shane Murray (3435). Individual weapons shooting (combat handgun): Ernest Torres (3435).

* * *

The NM Section of the Materials Research Society and UNM's Dept. of Chemical and Nuclear Engineering are sponsoring a Southwest Regional Conference/Workshop on "Developments in High-Temperature Superconducting Materials" Oct. 1-2 at the Eldorado Hotel in Santa Fe. Sandians participating as speakers/discussion leaders are Jim Schirber (1150), Ron Loehman (1842), David Ginley (1144), Eugene Venturi (1131), Terrence Aselage (1842), and Bruno Morosin (1842). For more information on the Conference, contact George Samara (1130) on 4-6653.

* * *

Don't miss "The Big One" — the 17th Annual Albuquerque International Balloon Fiesta Oct. 3-11 at the launch site between Paseo del Norte and Alameda Blvd. To commemorate New Mexico's 75th year of statehood, a spectacular "Bicentennial Diamond Jubilee Balloon Glow" is scheduled for Oct. 4. Two hundred static hot air balloons will glow like oversize luminarias in the sky. Between 6:30 and 7 p.m., balloonists at the launch site will form a giant diamond outline with a huge "75" in the center of the anniversary logo. Also new to the Fiesta this year is the Misty Blues All Women Sky Diving Team, performing at 7 a.m. Monday through Friday. Volunteers with strong arms are needed to help set up the launch site the weekends of Sept. 19 and 26. Other volunteers are needed during the Fiesta itself. Call Sandy Dawson at the AIBF office on 344-3501 if you can help out. For information on hot air and gas balloon pins, patches, and calendars, contact Ruth Birdseye on 255-6328. Fiesta program brochures and bumper stickers are available in the LAB NEWS office (Bldg. 814) and in Finance (Bldg. 802).

* * *

The "Best of Everything" is the theme of the 24th Annual Apple Festival sponsored by All Faiths Receiving Home Auxiliary on Oct. 9 from 10 a.m. to 2 p.m. at First Presbyterian Church (215 Locust NE). Activities include a lunch served by Larry Ahrens (KKOB Radio), a bazaar, bake sale, and raffle for a pair of round-trip tickets to London donated by TWA. Lunch is \$3.50, door prize tickets \$1, and raffle tickets \$10 (3 for \$25). Proceeds benefit All Faiths (a United Way agency), a nonprofit facility that provides temporary and emergency care for neglected, abandoned, or abused children. For more information or tickets, contact Ann Riley (3722) on 6-1857.

* * *

The 1988 Annual Reliability and Maintainability Symposium will be held Jan. 26-28 at the Biltmore Hotel in Los Angeles. The theme is "What's Happening? A Review of Assurance Developments for the Future." For more information, contact Robert Schueppert of Beckman Instruments, Inc., on (714)773-8831.

* * *

Tau Beta Pi, the national collegiate engineering honor society, is starting an alumni chapter for the state of New Mexico, open to former TBP members from any school. The primary goal of the chapter is to support the local student chapter at UNM by providing a pool of engineering professionals willing to lend advice to students making career decisions. An organizational meeting will be held Oct. 9 at 7:30 p.m. at UNM in the Electrical Engineering Bldg., Rm. 118. If you're interested but cannot attend the meeting, or for more information, call Paul Basore (6224) on 6-4516 after Oct. 1.

SNLA & SNLL Benefit from Summer Sandians

Nearly 300 students and teachers spent the summer at Sandia. It's a mutually beneficial exchange — the "summer-hires" give their talent and get Sandia experience in return. Sandia gives a paycheck and gets work done that might not get done otherwise — and, often, some good new ideas to boot. The summer programs are also excellent recruiting tools (see "Rationale for Summer Programs").

The 300 represented a wide range of academic levels (high-school students to university professors) and wide geographic dispersion (home states ranged from Rhode Island to California), and each was part of one of a correspondingly wide range of Sandia summer programs.

The largest major program is the Outstanding Student Summer Program (OSSP), which has been around, under different names but with the same purpose, for 29 years. Nearly 70 undergrads and grad-school students took part in OSSP at SNLA and SNLL this summer (see "Short-Term Employees, Long-Term Benefits").

Sandia has three other major summer programs: for university professors, minority students and faculty, and junior high and high school teachers.

Respite from Theory

For university professors, a summer at Sandia offers a respite from pure theory — teaching it, preaching it, or inventing it. Thirty-two professors, including seven at Livermore, were part of the University Summer Faculty Program (USFP) this year. The 35-year-old program, the oldest of the four, "has, all along, been meant to draw in scientists and engineers who are technical authorities in their fields," says Marv Torneby, manager of Personnel Department 3530. "Here they can either guide R&D programs or assist in specific projects — with some leeway to go off in a new direction that's interesting to Sandia" (see "USFP Prof Values Good Company").

Recruitment for USFP is a year-round effort, with most matchups made directly by the technical organizations. Participants are limited to two years in a row, then they have to skip a year to be eligible again.

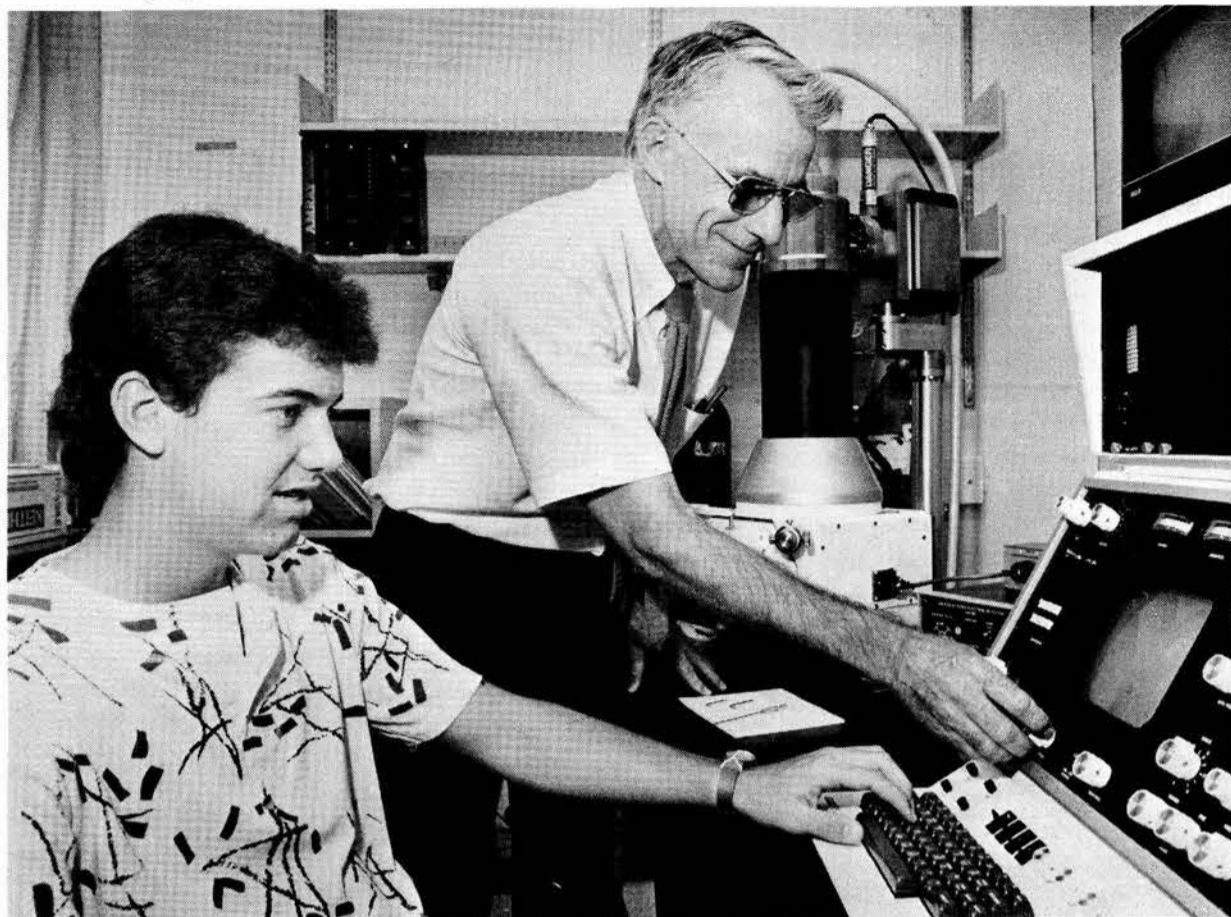
Several minority students and faculty at Sandia for the summer came from the nationwide Historically Black Colleges and Universities (HBCU) program. They're a mix of undergrad and grad students and teachers — 14 in all (see "R&D Work Style Clarifies Goals").

Funded by DOE through Equal Employment Opportunity/Affirmative Action Department 3510 for the second year, the program is designed to attract potential technical staff members and OYOC (One-Year-on-Campus) candidates, according to Jake DeVargas, 3510 manager. The HBCU program aims at engineering and science students (sophomores and up) in a four-year college program in any of seven member schools.

The High School Summer Faculty Program (administered only at SNLA) brings teachers in both technical and non-technical fields to Sandia. Sixteen science and math teachers came in through STEP (Summer Teacher Enrichment Program), a statewide program managed at N.M. Institute of Mining and Technology in Socorro. STEP was initiated four years ago by U.S. Senator Pete Domenici and former Sandia President George Dacey; participants include several private firms in addition to Sandia (see "Clear Communications Vital in High-Tech Jobs").

On the non-technical side, two English teachers, Jean Nelson (3732) and Art Wright (3151) were recruited by the CGI (Career Guidance Institute) of the Greater Albuquerque Chamber of Commerce, and came here to hone their communications skills.

Jean, an English teacher from La Cueva High School, spent the summer eradicating legalese from user-surly purchasing instructions (PIs). She worked to reduce PIs into easy English and rearrange them



THREE-YEAR VETERAN of the STEP (Summer Teacher Enrichment Program) is Lionel Burkes, a former Tucumcari High teacher who now teaches Earth/Life Sciences in a Ft. Smith (Ark.) high school. Assigned to Technology Transfer and Management Dept. 4030 this year, he was inspired by his STEP opportunities: "My discussions with top scientists, especially in the geosciences, have enhanced my understanding of the field. I feel a greater responsibility toward doing my very best with my students." One of Lionel's students who benefited directly is Randall Hinton (left), who spent two weeks this summer visiting Lionel in Albuquerque. Here, they get acquainted with a research tool, a new scanning electron microscope, in Electron Optics and X-Ray Analysis Div. 1822.

for easy reference. "The revamped — and updated — PIs, with their new subtitles and cross-indexes, will be a handier tool for Sandia buyers," says her supervisor, Miriam Hall (3732).

This fall, Jean will have some solid advice that she can pass on — along with renewed enthusiasm — to her composition classes. "Students believe you more readily when they hear you've been working in the 'real world,'" she says. "So they listen more closely when you describe what the business world expects of them: clarity, conciseness, and a vocabulary that's easily understandable."

Other Summer Programs

In addition to these four major programs, which are geared toward those with training in areas of spe-

cial interest to Sandia, several other programs bring summer-hires to the Labs:

- Youth Opportunity Trainee (YOT) — for high school students (and those with some college) whose eligibility requires good grades, a teacher's recommendation, and a family income below a set level. Ninety-three students from Albuquerque and Livermore schools worked through the summer at Sandia, with at least one assigned to each vice-presidency. The YOTs helped fill the gap left by Sandians on vacation. And some of them, those invited to stay on part-time during the academic year, became part of the Work Experience Trainee (WET) program.

Many YOTs quickly became valuable members of their divisions. Ted Garcia (1845), for example, wrote an Internal Memorandum on FORTRAN codes

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Missionaries and Diplomats

Rationale for Summer Programs

Passing on enthusiasm and information about Sandia's R&D programs to others is exactly what Mel Mefford, supervisor of Staff Recruiting and Employment Division 3531, sees as the most important result of all of the summer programs. "Our summer-hires act as Sandia's missionaries and diplomats," he says. "And that has a ripple effect on applications for upcoming summers."

Venky Narayanamurti (1000) emphasizes the importance of finding researchers to meet both short- and long-term needs of Sandia's technical organizations. As he told Sandia's college faculty summer-hires, "Students, in particular, are our lifeblood here. And you are our key contacts with universities nationwide."

"Professors are often good sources of referrals," adds Marv Torneby, manager of Personnel Dept. 3530. "They have captive audiences in their classes and can 'calibrate' students for Sandia-related assignments in the future."

The process of attracting school people and

acquainting them with Sandia serves several related goals:

- Selectively luring researchers who understand Sandia's work and promote interest in it among their colleagues;
- Multiplying participants' skills, thus leading to technical contributions and building some lasting relationships with specialists who can consult on continuing projects; and
- Identifying high-quality people, particularly among the students, as possible permanent employees.

So summer programs supplement formal recruiting efforts, both within Mel's division — by Bob Banks for PhDs, by Marty Noland for people with bachelor's and master's degrees — and throughout the technical organizations by the 200 or so part-time recruiters (LAB NEWS, Dec. 19, 1986).

Kids in Classrooms Will Get Message

Clear Communications Vital in High-Tech Jobs

Math and computer science teacher Phyllis Metzler (1520) has been at SNLA for three summers running, most recently through STEP (Summer Teacher Enrichment Program). "The first summer, I wrote a fairly comprehensive computer program for Divisions 1522 and 1524, under the direction of a design engineer," she says. "The old program had been modified so many times that the logic was destroyed. I had to rewrite that code to clean it up."

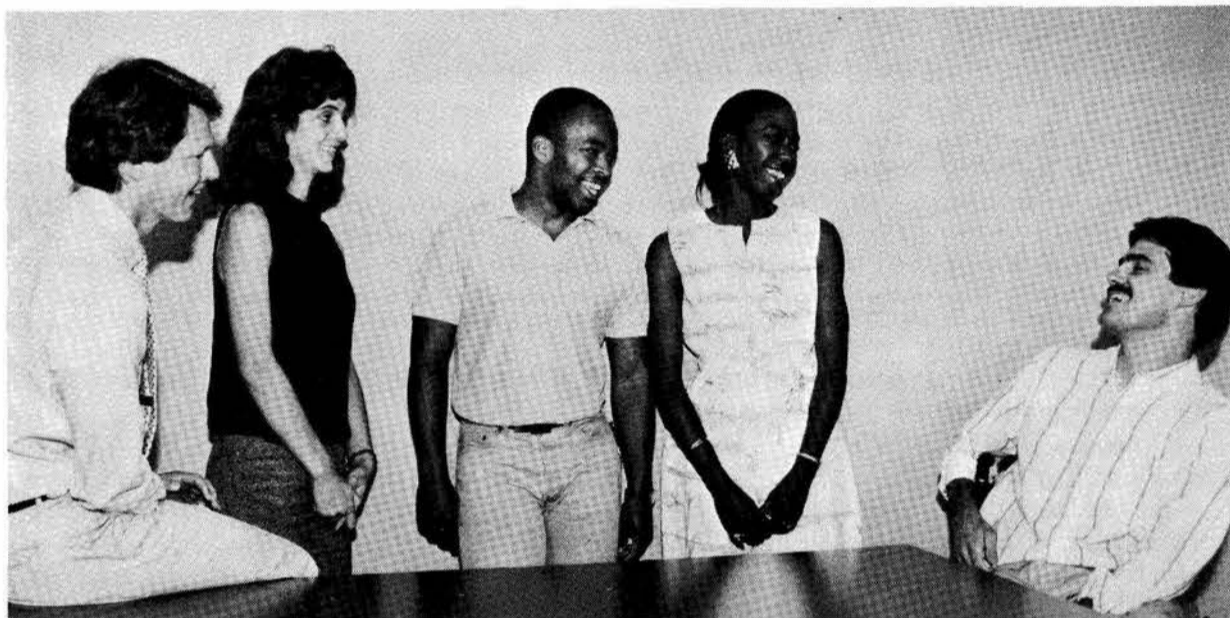
"Last year I wrote two translator programs to allow two major software packages to talk to each other," she continues. This summer, she dug back into the translators and plugged in updates required by the programs' users.

This fall, Phyllis is a Math Resource teacher for the APS (Albuquerque Public School) district. "My message to students — and computer science teachers — will be to impress upon them the need to break down computer programs into smaller parts," says Phyllis, "and for documenting what they do. Kids generally don't accept that."

Their stock attitude is 'If it works, it must be OK.' But if they had to work with 5000 lines of code, as I had to do, they'd see how tough it is to retrace your steps when you have to go back in to change something."

Influenced by her stays at Sandia, Phyllis recently audited some engineering-type math courses (which she'd never taken before). And she added two SAND reports (jointly authored with Sandians) to her resume.

And she's become a better career counselor: "Teachers give more advice on a day-to-day basis than official counselors do. I intend to point out to kids headed for high-tech jobs that clear communication will be important to them — not just the English majors — because they will have to report on their work. Speaking foreign languages such as French and German can come in handy too. And public-speaking skills can be more important to engineers and scientists than the students imagine."



MEMBERS OF THREE SUMMER PROGRAMS at SNLL are included here: from right, Neal Fornaciari (8362), one of two Chabot Summer Program participants; Teri Quinn (8361) and Aaron Galloway (8343), the two Historically Black Colleges and Universities students; and Monica Johnston (8444), one of 13 SNLL participants in the Outstanding Summer Student Program. On left is Dave Rosenzweig (8022), Livermore's summer program coordinator.

(Continued from Preceding Page)

and Lotus 1-2-3 graphics last summer and this summer mastered some complex computer-assisted drafting tools to the point that members of the division came to regard him as a local expert. He also helped to upgrade a MicroVAX system and to install a local area network around the system. He's a senior at N.M. State and, to quote Frank Gerstle, 1845 supervisor, "a super kid."

- Associated Western Universities (AWU) — a growing set of programs for temporary study and continuing research (but not employment) that's administered by the AWU, headquartered in Salt Lake City. Seventeen students and faculty — including 10 summer-timers — took part in six programs.

- Faculty Sabbatical — for four to six faculty members, primarily in technical fields. The individualized program can range from nine to 15 months, not a long time as careers go. But the effects of even a brief stay can be significant. Prof. Montgomery Shaw from the University of Connecticut, for example, worked a year in Physical Properties of Polymers Div. 1813 several years ago and helped to develop the microcellular foam program now getting nationwide attention (LAB NEWS, Aug. 14, 1987). "If you look at the patent on the new foam, you'll find his name included," notes John Curro (1813).

And Curators' Prof. Delbert Day of the University of Missouri at Rolla, a faculty sabbatical in Chemistry and Ceramics Dept. 1840 a few years ago, initiated several studies of calcium-aluminate and

phosphate glasses that are being carried on today by Sandia staff. Prof. Day has become a valued consultant, according to Bob Eagan (1840), "and this summer he sent Sandia one of his students, Tod Neidt [1842], who was an outstanding summer-hire."

- Undergraduate Engineering Co-op — for students from UNM, NMSU, California Polytech (San Luis Obispo), or eight other schools with high-caliber minority enrollment. Two students are working full-time at the Labs through the fall semester and will go back to school in the spring.

- Graduate Engineering Student Internship and Graduate Business Student Internship — both designed to attract outstanding grad students to UNM's

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OUTSTANDING SUMMER STUDENT Joe Keddie, who worked in Ceramics Development Div. 1845 this summer, asked enough questions and did enough research that he left behind him a project that could lead to a tougher ceramic composite. With Joe is the coordinator of the Outstanding Summer Student and the High School Summer Faculty programs, Marty Noland (3531).

No Cookbook Assignments

R&D Work Style Clarifies Goals

Of the 14 Sandia participants in the Historically Black Colleges and Universities Program, two worked at SNLL — and like most students, appreciated the chance to work with some sophisticated instruments.

Reggie Mitchell (8361) handed over an "elemental analyzer" in June to chemist Teri Quinn (8361), a graduate of Jackson (Miss.) State, for her use in the Combustion Research Facility. Bad news was, the instrument wasn't working. She checked the combustion and reduction tubes, repaired the device, calibrated it, wrote a users' manual for it — and then used it for her project. "I got to know it really well, inside and out," says Teri.

A month with a working instrument sufficed for a summer project — a good look at how coal burns. "Study of coal combustion is linked to solving pollution problems from acid rain," she notes. "Using the analyzer, I examined how quickly coal burns and the types of residue it leaves behind."

She was also able to do some independent work, and that was the best part of her stay at Sandia: "I didn't get cookbook assignments," she says. "No one was peering over my shoulder telling me what to do. I got to develop new ideas for myself, and I certainly enjoyed the experience — even when things were true to life and not exactly working properly."

Aaron Galloway, who worked in Surface Science and Chemical Physics Div. 8343, had an entirely different apparatus at his disposal, an Apple Macintosh Plus for graphics displays. "I wrote a program for rotating silicon molecules in 3-D," he says. "Then I looked at diffraction: how atoms hit barriers, bounce away, and form patterns." He also helped an engineer and a technician put together a positive-ion accelerator.

Aaron is a junior in chemical engineering at Prairie View A&M (Prairie View, Tex.). As he headed back this fall, he was still leaving his options open on what exactly he wants to study. But the Labs experience helped him see well beyond his next semester: "Sandia showed me I can go on, that I should go on, for my PhD. Experiencing a daily R&D work style encouraged me to set my goals about a decade down the academic road."

Search On for 88

It's taking about nine months to obtain a security clearance for Sandia employees these days. So it's important for technical organizations to propose summer hires for FY88 as soon as possible.

For more info on summer and temporary programs, call Melinda Markey on 4-8458 or Marty Noland (both 3531) on 4-1200.

Summer Programs

School of Engineering and the Robert O. Anderson School of Management. The two-year program involves half-time work at the Labs and a course load of nine credit hours, with work at the Labs during the intervening summer. Six students are currently enrolled.

• Chabot Summer Program — an SNLL program for students who intend to transfer from two-year Chabot College to a four-year program elsewhere. Two students are selected yearly by Chabot's faculty for summer work at the Labs; Neal Fornaciari (8362) and David Komyathy (8354) were this year's summer work/study participants.

• BH/Irene Dubicka (7212)



AT&T Scholarship Holder at Sandia

Pulsed Power Work Aids Career Choice

He's well-prepared for a four-year undergraduate program in either engineering or computer science at MIT, says Francisco Doñez (1251), because he's "had a chance at Sandia to move about freely in the informal, friendly atmosphere of an engineering institution" and "to rub shoulders with the experts in residence."

Francisco was awarded one of only 15 AT&T engineering scholarships to the university of his choice, plus a job each summer at an AT&T location. He started the scholarship off with a summer job in Pulsed Power Engineering Div. 1251 as a part of the Outstanding Summer Student Program.

His AT&T scholarship followed directly on the heels of an APS (Albuquerque Public Schools) Career Exploration program that allowed him to complete his senior year at West Mesa High School while working half-days at Sandia (see LAB NEWS photo, April 10, 1987). As a result, Francisco has spent almost a whole year on pulsed power research — and was a witness to the first firings at the EPOCH Lab, the new 100-metre electron-beam propagation tube facility.

Hands-On Tasks in Pulsed Power

Francisco didn't just sit around and watch the milestones pass by. For the EPOCH experiments, for example, he got some hands-on experience in assembling propagation tubes and diffusion pumps and tanks.

But "his biggest contribution to work in the division was to enhance the data analysis software for PBFA II [Particle Beam Fusion Accelerator]," says 1251 supervisor Ed Burgess. "Francisco dug into a large computer program that had limitations in structure — the number of names and labels we can give data. He modified it so that we can put in an almost unlimited amount of identifiers. He also wrote some code that allows us to use old data files in the new format."

Although Francisco may not be back here next summer (he's considering other AT&T sites), Sandia has left its mark on him. "The experiments going on here and the people I met confirmed what I *thought* I liked: engineering. And I became especially interested in mechanical engineering."

Meet Two OSSP Veterans

Short-Term Employees, Long-Term Benefits

Graduate students-to-be Bill Fahrenholtz (1846) and Joe Keddie (1845) were temporary office mates in "temporary building" T-48. Typical participants in the Outstanding Student Summer Program (OSSP), they came to Sandia to work and to learn — and to bridge the time between receiving their BS degrees in ceramics engineering (in Illinois and New York, respectively) and going on to grad school.

Using chemicals, Bill worked to increase the thickness of thin films, an Inorganic Materials Chemistry Division assignment. Over in the Ceramics Development Division, Joe tested coatings for alumina fibers in an attempt to make better glass ceramics.

PhD programs in materials engineering lie ahead for both — at the University of Illinois (Champaign/Urbana) for Bill, at Cornell (Ithaca, N.Y.) for Joe.

Bill was impressed by the ready availability of research equipment: "I enjoyed working in a lab where everything I needed was on hand or in stock." He figures he won't have a lab to himself again very soon: "In graduate school you've got to share equipment with a lot of other students. And your class schedule gets in the way of uninterrupted research."

Joe first took part in OSSP last summer (a second year is allowed if the participant didn't get a security clearance on time) and later applied his 1986 work on zirconia glass ceramics to his senior thesis at Alfred University (Alfred, N.Y.). "I became specifically interested in [the sub-area of] mechanical properties of glass ceramics — and studying interfaces. Now I'd like to continue at Cornell with similar research on fiber reinforcement."

Joe's mentor at Sandia, Terry Michalske (1845), believes both Joe and the division gained a lot from the summer stretch. "We got some work done that wouldn't have gotten done otherwise," says Terry. "But extra manpower is probably the smaller gain."

"The bigger gain is that Joe brought in some new ideas that we might not have thought of," he continues. "Ideas are the heart of research, and because Joe asked a lot of good questions and spent a lot of time in the library, we've gained a project that can be tested and analyzed by someone else later on: It's a way to increase the toughness of a ceramic composite by treating aluminum oxide fibers with a tin-chloride solution, which decreases the bonding between a glass matrix and the fibers. Good stuff."



AT INFORMAL GET-TOGETHER for members of the University Summer Faculty Program, USFP coordinator Bob Banks (3531) introduces Jim (7111) and Alice Cadzow to Venky Narayanamurti (VP 1000). Jim teaches electrical engineering at Arizona State.

Productive and Creative Summers

USFP Professor Values Good Company

James Cadzow, who teaches electrical engineering at Arizona State, worked with Sam Stearns (DMTS) in Ground Motion and Seismic Div. 7111 this past summer as a part of the University Summer Faculty Program.

Jim, who earned his PhD at Cornell, has been here four different times — and for good reason: "I don't want to be locked up in an ivory tower, no matter how interesting it is," he says. "An engineer, by definition, is someone who should be closely linked to the real world. And so I'm here for the practical experience — for myself and my students."

At Sandia he gets a chance to plug some real numbers — data from an array of seismometers and other instruments — into his math models. From those, he can estimate the intensity and loca-

tion of earthquakes or underground weapon detonations.

Two dozen papers have resulted so far from Jim's four summers in communications and signal processing at Sandia. And, as he returns to his research in Arizona, he has stronger models — ones built on real-world input data.

On top of all that, Jim adds, "I enjoy myself here. I have the opportunity to really sit down and look at a problem. The university gives me hardly any time to think about things."

"I have good company here too, people with a variety of interests and skills — geologists, for example, who can be sounding boards for some of my ideas," he continues. "That's why my Sandia summers are so productive and creative."

Fun & Games

Feet Across America — As of Sept. 21, Feet Across America had reached Mt. Rainier, 5025 miles from the starting point in Maine. On to Alaska!

* * *

Softball — Sandia Softball Association end-of-season results are as follows: A League — First place, the Naturals, coached by Steve Mahnesmith (7544); second, Fat Cats coached by Dennis Gutierrez (7535); and third, Dawgs coached by Gary Rivord (2616). B League — First, Woody's Talking Heads, coached by Anthony Romero (1822); second, Watermelon Express, coached by Ed Cooka (2858), and third, Sharks, coached by Gerry Lipka (7831). C League — First, TTC, coached by Greg Scharrer (2522); second, Berserkers, coached by Mike Arms (9224); and third, ASS II, coached by Dan Drummond (9241). Women's League winners — First, Highballers, coached by Ken Varga (2542); second, Right Stuff, coached by Ernie Montoya (7411); and third, Twisted Sisters, coached by Marlene Shields (1542).

Post-Season Tournament finals are: A League — First, Naturals; second, Fat Cats; and third, Bandidos, coached by Al Lara (BAO). B League — First, Woody's Talking Heads; second, No Respect, coached by Brent Sims (7525); and third, Watermelon Express. C League — First, ASS II; second, Generics, coached by Patrick Sena (5257); and third, Slowballers, coached by Bob Davis (2641). Women's League — First, Highballers; second, Twisted Sisters; and third, Right Stuff.

The Naturals took first place in the ASA Industrial State Tournament; Dawgs won fourth; and the Roadrunners, coached by Al Baca (7815), took fifth.

* * *

Marathon — Aircraft Compatibility Div. 5123 has picked up Medical's challenge to enter the most employees in the Duke City Marathon on Sept. 27. So far they have 99 percent participation, and issue their own challenge to other divisions to participate. Remember to pick up a registration form in the TLC office (Bldg. 831) and leave your name and organization, so you can be counted for your organization.



TOUR OF RHIC LAB, recognized by the U.S. semiconductor industry as currently the world's leading integrated circuit facility design, was a highlight of the SEMATECH Facilities Workshop held recently in conjunction with a SEMATECH Defects Workshop. The workshops, both hosted by Sandia, attracted 120 participants, most from industry, some from government and the national labs; SEMATECH is a consortium of semiconductor principals concerned with manufacturing development. The workshops were two in a series that aims to create "roadmaps" — steps required to get to certain pegpoints (in terms of submicron feature sizes) for semiconductors of the 1990s. Here, Bob Gregory (2100, left) focuses one tour group's attention on the unique floor of a RHIC (Radiation-Hardened Integrated Circuit) clean room. The floor allows a laminar air flow through it while maintaining outstanding rigidity — anti-vibration — characteristics. That's important because, as workshop coordinator Doug Weaver (2130) explains, "you don't know how sensitive to vibration the new equipment coming on line in the 90s is going to be." RHIC lab occupancy will begin next month.

Attention Retirees

Sandia retirees are now eligible to use the AT&T corporate contract with Avis and National car rentals. You may continue to use the Avis card and ID number that you now have. National does not require a card. To make reservations, refer to the table below for the appropriate information, call the toll-free number, identify yourself as a

Sandia National Laboratories retiree, and provide them with the ID number. If you have any problems, please notify Chris Roan on 846-9959.

Choose co.	Call toll free:	Give ID number
Avis	1-800-331-1212	A/A 134500
National	1-800-227-7368	1001175

Events Calendar

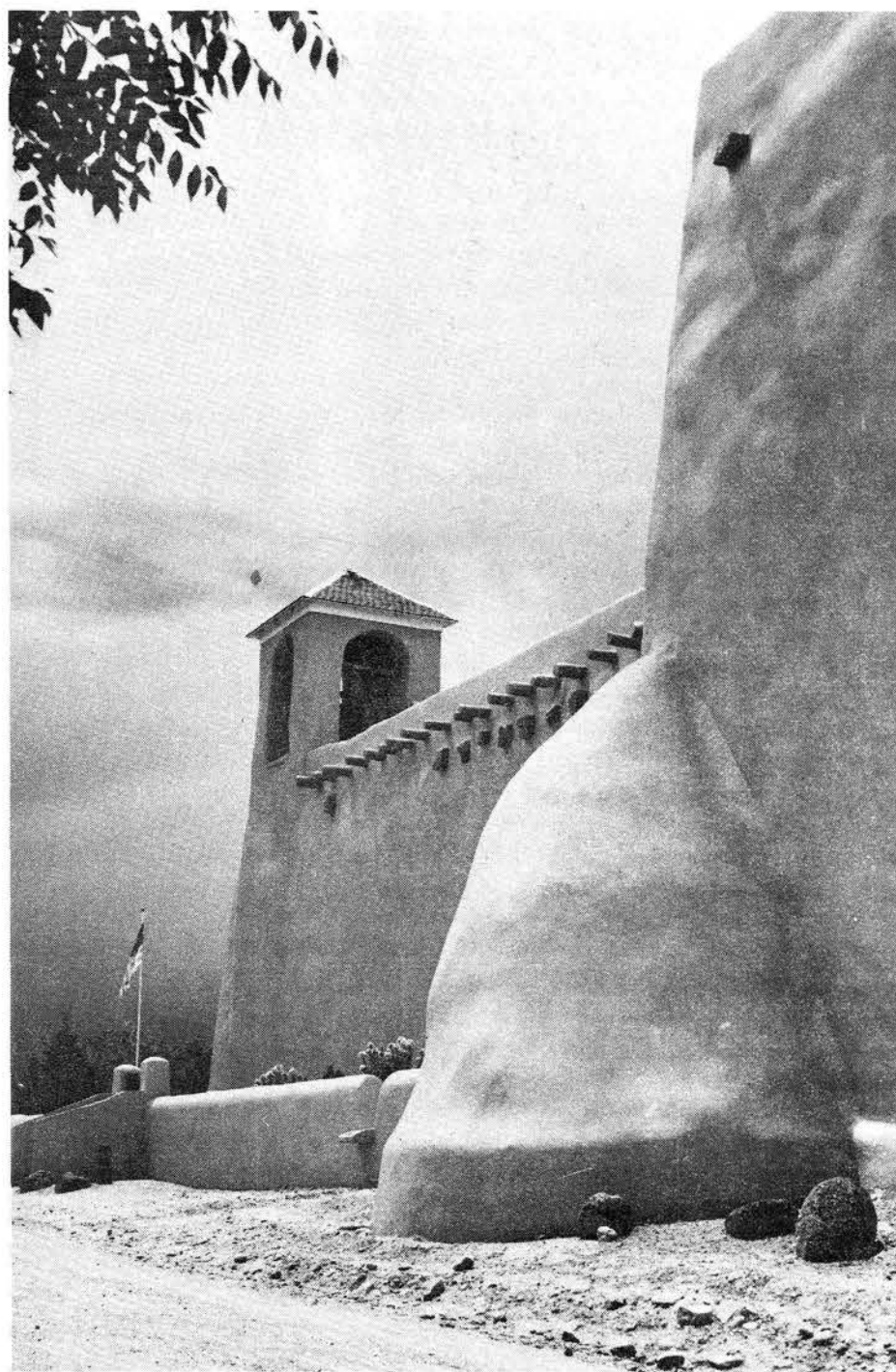
Sept. 25 — St. Elizabeth Feast Day: Harvest and social dances, Laguna Pueblo, 843-7270.
 Sept. 25-27 — New Mexico State Fair, State Fairgrounds, 265-1791.
 Sept. 25-27 — NM State Fair Professional Fine Art Exhibit, annual juried exhibition during the State Fair; 9 a.m.-9 p.m., Fine Arts Gallery, NM State Fairgrounds, free, 265-1791.
 Sept. 25-29 — Exhibit, Storytellers by Ramus Suina of Cochiti Pueblo; 9 a.m.-6 p.m., Gallery, Indian Pueblo Cultural Center, 843-7270.
 Sept. 25-30 — "Shenandoah," sentimental musical about the Civil War, Albuquerque Civic Light Opera Association; 8:15 p.m. Fri. & Sat., 2:15 p.m. Sun.; Popejoy Hall, 345-6577 or 277-3121.
 Sept. 25-Oct. 4 — Focus Photo Series: Ted Kuykendall Photographs; 10 a.m.-5 p.m. Tues.-Fri., 1-5 p.m. Sat. & Sun.; Albuquerque Museum, 243-7255 or 242-4600.
 Sept. 25-Oct. 4 — "Light Up the Sky," Moss Hart comedy; 8 p.m. Wed.-Fri., 6 & 9 p.m. Sat., 2 p.m. Sun.; Albuquerque Little Theatre, 242-4750.
 Sept. 25-Oct. 18 — "Antigone," classic Greek tragedy; 8 p.m. Fri. & Sat., 6 p.m. Sun.; Vortex Theatre, 247-8600.
 Sept. 25-Oct. 19 — Exhibit, "From the Center Place: Contemporary Zuni Pottery and Its Makers"; 9 a.m.-4 p.m. Mon.-Fri., 10 a.m.-4 p.m. Sat.; Maxwell Museum of Anthropology, 277-4404.
 Sept. 25-Nov. 1 — Exhibit, "The African Desert: Photography by Bernard Plossu"; 11 a.m.-5 p.m. Tues.-Fri., 1-5 p.m. Sat. & Sun.; Albuquerque Museum, 242-7255.
 Sept. 25-Nov. 13 — Exhibit, "Works on Paper, 1930-1986," by William Lumpkins; 9 a.m.-4 p.m. Tues.-Fri. (5-9 p.m. Tues.), Jonson Gallery,

277-4967.
 Sept. 26-27 — Classical Concert I, presented by the NM Symphony Orchestra, featuring music by Strauss, Mozart, & Schubert; 8:15 p.m., Popejoy Hall, 842-8565.
 Sept. 27 — Concert, Albuquerque Youth Symphony; 3 p.m., Popejoy Hall, 842-3684.
 Sept. 27 — "Let's Call the Whole Thing Gershwin," cabaret presented by Albuquerque Opera Theatre, featuring music by George Gershwin; 2 p.m., KiMo Theatre, 266-7708.
 Sept. 27 — Sunday Jazz at the Fair, sponsored by the NM Jazz Workshop: 12:45 p.m. Joan & John Griffin Duet, 2 p.m. Desert Winds, 3:15 p.m. Alan Lewine Quintet, 6 p.m. Alma; NM State Fairgrounds.
 Sept. 27 — Fine Arts Music Series: The Hambro Quartet of Pianos; 4 p.m., First United Methodist Church (4th & Lead SW), 243-5646.
 Sept. 29-Oct. 3 — Cutting Horse Classic, Adrian Berryhill Memorial; indoor & outdoor horse arenas, NM State Fairgrounds, 869-6737.
 Sept. 30 — San Geronimo Feast Day: Buffalo, Comanche, and Corn Dances, trade fair, ceremonial foot races, and pole climb; Taos Pueblo, 843-7370.
 Oct. 1-5 — "Nuevo Mexico, Si!" La Compania de Teatro de Albuquerque presents musical travelogue of NM history; 8 p.m. (2 p.m. Sun.), Menaul School Theatre (Menaul & Broadway), 242-7929.
 Oct. 1-3, 8-10 — "The Adding Machine," UNM Dept. of Theatre Arts season opener; 8 p.m., Rodey Theatre, 277-4402.
 Oct. 2-3 — "Anna Karenina," Ballet West of New Mexico, Ballet West of Utah, and the NM Symphony Orchestra perform music from Tchaikov-

sky, choreography by Andre Prokovsky; 7:30 p.m. Fri., 2 & 8:15 p.m. Sat.; Popejoy Hall, 842-8565.
 Oct. 2-4 — Grecian Festival: Greek food, entertainment, & dancing; noon-10:30 p.m., St. George Greek Orthodox Church (308 High St. SE), 247-9411.
 Oct. 2-4 — NM Gun Collectors' Association Gun Show, antique and modern firearms; 8 a.m.-6 p.m., Exhibit Hall, NM State Fairgrounds, 898-2983 or 296-7777.
 Oct. 3 — "Halau 'O Kekuhi," ancient and traditional hula dances and chants rarely performed in public; 7:30 p.m., Museum of American Indian Arts and Culture in Santa Fe, 848-1374.
 Oct. 3 — Big Band Dance, music of the '30s & '40s, Old Gold Orchestra; 8:30 p.m.-midnight, Convention Center, 298-1002.
 Oct. 3 — Rio Grande Kennel Club Dog Show, all breeds & obedience; new Exhibit Hall, NM State Fairgrounds, 296-3611 after 5.
 Oct. 4 — Corrales Pops Concert, Chamber Orchestra of Albuquerque; 2 p.m., Corrales Library Park, free, 881-0844.
 Oct. 4 — Dinosaur Rock, puppets & music; 2 p.m., KiMo Theatre, 848-1374.
 Oct. 4 — San Francisco Feast Day, Nambe Pueblo, 843-7270.
 Oct. 4-11 — "Indian New Mexico," dance performances daily, Balloon Fiesta activities; 11 a.m.-2 p.m., Indian Pueblo Cultural Center, 843-7270.
 Oct. 8 — "Koyaanisqatsi," film and live Philip Glass music; 7 & 9:30 p.m., Hiland Theatre, 848-1374.
 Oct. 9 — Crownpoint Rug Weavers rug auction; 3-6:45 p.m. rug viewing, 7 p.m. auction; Crownpoint Elementary School, 786-5302.



PHOTOS BY LOUIE ERNE (ret.) give an appropriate flavor of New Mexico to a new cookbook, *Seasoned With Enchantment*, compiled and published by the Assistance League of Albuquerque. Among its other service projects, the League operates Blue Portal, an outlet for items made by local senior citizens; Hospitality House, the first senior citizens center in the city; the Loan Closet, which lends toys and equipment to special pre-schoolers; and the Bargain Box, a thrift shop. The spouses of several Sandians contributed recipes to the 240-page cookbook, which features a dozen of the scenic photos Louie has taken over the last 40 years; the left photo shows ruins of the Ft. Union officers' quarters; the right photo, the church of St. Francis of Assisi in Ranchos de Taos. Liz Bass (wife of Bob, 7111) and Norma Erne served on the committee that put the book together. The book is available at the Blue Portal in Old Town, the airport gift shop, Foley's (formerly Sanger-Harris), and the League chapter house (529 Chama NE). It sells for \$12; proceeds go to the League's projects.



Medical Corner

It's Mental Illness Awareness Week

by Arlene Price (3330)

**MENTAL
ILLNESS
AWARENESS
WEEK**

October 4-10, 1987

At least one out of five Americans a year is afflicted with mental illness, according to the American Psychiatric Association.

In fact, mentally ill people occupy more hospital beds than those with cancer, lung disease, and heart disease combined. And the costs of

mental illness exceed those of cancer and heart disease.

It's not surprising, then, that Congress has declared Oct. 4 through 10 Mental Illness Awareness Week. It's an appropriate time to learn more about mental illness — how prevalent it is, what its costs, what its signs and symptoms are, how it affects families, and how treatable it is.

All these issues will be covered in the panel discussion on Oct. 7 (see box), but let's touch on some of them here.

Mental illness can impair thinking ability and cause changes in emotions and behavior. Right now, schizophrenia, a serious thinking disorder, affects 1.5 million people — and 300,000 new cases occur each year. That makes schizophrenia twice as prevalent as Alzheimer's disease and 12 times more prevalent than muscular dystrophy.

More than 9 million people currently suffer from "affective," or mood, disorders. These include various forms of depression and are marked by extreme sadness, extreme excitement, or both. Approximate-

ly 30 million Americans — 15 percent of the population — will suffer at least one episode of major depression sometime in their lifetimes.

Although effective treatment is available, only one in five of those with mental illness seeks help. Only about half of those with schizophrenia, for example, seek treatment — even though medications alone effectively stop acute symptoms in 80 percent

of all patients.

Fewer than a third of those with depression seek help — and here, with the proper help, 80 to 90 percent could improve and get well.

About a quarter of the elderly people regarded as senile are actually mentally ill; they too can respond favorably to treatment.

The big tragedy, however, is mental illness in kids — only 4 to 15 percent of those suffering from serious mental illness receive proper treatment.

So Why Don't They Get Some Help?

One of the main reasons people avoid obtaining professional help is the prevalence of negative attitudes toward mental illness and toward people who seek help.

But, remember, no one has a right to point a finger at anyone else — no one is immune.

Serious mental illness can strike anyone at any time. And when it does, no one is to blame. Mental illness does not result from poor parenting. Or weak character. Or lack of education. Or lack of money. In fact, it cuts across all races and socioeconomic groups — it's truly an equal opportunity illness.

Rep. Ron Wyden (Ore.), author of the House Resolution for Mental Illness Awareness Week, states, "Mental illness is a problem of staggering proportions, with an estimated 31 to 41 million suffering from diagnosable mental disorders. The problem can be turned around by letting people know help is available for mental illness. Appropriate treatment can help these people resume fulfilling and productive lives."

Sandia to Observe Mental Illness Awareness Week

Medical's TLC Program is sponsoring a special program in honor of Mental Illness Awareness Week, Oct. 4 through 10. A panel of guest speakers will discuss mental illness and its effect on the family and will provide pointers on seeking professional help.

The panel includes John Gluck, Professor of Psychology at UNM; Dr. Albert Vogel, Medical Director of UNM's Medical Health Center; and Marge Cooney, President of the NM Chapter of the Alliance for the Mentally Ill, a self-help organization of families and friends of the seriously mentally ill.

The program is from noon to 1 on Oct. 7 in Bldg. 815 (outside the Tech Area). "Since it's almost impossible for anyone to escape from the effects of mental illness among one's family or friends, please join us for what promises to be a most thought-provoking program," says Sandia's Clinical Psychologist, Arlene Price (3330).

Family Support Services Are Important to Our Community

Laughter rings through the courtyard. Milford Jenzen sits in his wheelchair, watching the boys and girls dance on the grass in a game of "Ring Around the Rosie." Every midafternoon Milford sits just outside the double doors to the Share Your Care Adult Day Care Center activities room to watch the children play. Milford is very friendly and greets each new visitor by introducing himself. The children are in another day care program at the church that houses the Center.

Share Your Care is a United Way agency that offers Milford and other frail, elderly adults who need supervision an opportunity to enjoy activities tailored to their individual needs.

The elderly and handicapped adults at Share Your Care have special problems (both physical and mental). The program provides mental stimulation, socialization, reality orientation, and exercise they would not get if they sat at home all day. They are able to live at home with their families, but they have a place to go during the day, a place where they can learn about current events and keep in touch with the world around them.

Families who turn to Share Your Care are usually those in which everyone works. They need day care for the frail or handicapped adults who live with them.

Share Your Care also offers counseling to families that have trouble coping with the problems of Alzheimer's disease and related disorders.

Helping Families in Need

Share Your Care is just one of the United Way agencies that provide help for many of the problems families face today in our community. These are others, and the needs they meet:

- There are currently 2446 children in day care, latchkey programs, and day camps. Campfire, Inc., the YMCA, and the YWCA provide before- and after-school programs for latchkey kids. Low-income families find day care help at Christina Kent Day Nursery and St. Mark's in the Valley Day School.
- Big Brothers/Big Sisters of Albuquerque recruits, screens, and trains adult volunteers to be matched to single-parent children ages 6-18. Activities range from general recreational, educational, and social opportunities to individual and team sports.
- On any given day, 500 to 1000 people in our community are homeless. Homeless families turn to the Salvation Army for assistance with food, lodging, and help with other problems. The Red Cross supplies food and shelter whenever there's an emergency. United



MILFORD JENZEN TELLING TALES with Cara Candelaria, activities director at Share Your Care Adult Day Care Center.

Way Helpline provides information and referral services to people who request emergency food and shelter.

- Alta Mira Specialized Family Services, Inc., provides early childhood services, respite care, and family support services for developmentally disabled people.
- Families in need of counseling services can turn to United Way agencies such as Albuquerque Family and Child Guidance Center, Catholic Social Services of Albuquerque, Family & Children's Services, and the Martineztown House of Neighborly Service.

Violence in the Home

In 1985 APD reported that incidences of rape and domestic violence increased 13.3 percent and 25 percent, respectively. Fifty-six percent of all sexual assaults occur in the victim's own home. One out of every five females suffers sexual abuse before age 18. Seventy to seventy-five percent of abusers were battered as children.

Behind these statistics are victims, people that United Way agencies help:

- All Faith's Receiving Home provides residential shelter care to abused, neglected, deprived, and abandoned children. It also runs community-based prevention services to help abusive parents and family units break the violence cycle.

- Albuquerque Shelter for Victims of Domestic Violence provides shelter, food, clothing, advocacy, and treatment — primarily to women and their children in immediate danger of abuse or who have been abused.
- Albuquerque Rape Crisis Center supports rape victims with a 24-hour crisis line, advocacy at the hospital, counseling, special prevention programs for all ages, and workshops for professional groups.

Meeting the Challenges of Growth

In 1985 the local civilian labor force totalled 241,053 and was projected to grow by 3.9 percent a year. At least 49,000 new jobs will be added between 1985 and 1990. Population growth is expected to be 2.9 percent a year for the next several years, with an increase of more than 14,000 new people each year in Bernalillo County.

As our community grows, its needs grow. Waiting lists for services provided by United Way agencies are growing. Agencies are finding it hard work to keep up, even harder to get ahead. Their work never stops.

Sandians have an outstanding record of support for the United Way through the Employee Contribution Plan. During the ECP campaign (Oct. 5-9), we again have the opportunity to show our generosity and to increase our giving as much as we can to the community that gives so much to us. ●JW

Death



Linda Giron, Work Experience Trainee in Reactor Systems Safety Department 6410, died suddenly Sept. 13 in an auto accident. She was also a Youth Opportunity Trainee this summer in Advanced Technology Division 5267 doing robotic testing work. She was a senior at Rio

Grande High School.

She had been at Sandia since June. She is survived by her parents and one brother.

AT&T Savings Plans

The following are the Earnings Factors for July 1987, for the AT&T Savings and Security Plan and the AT&T Savings Plan for Salaried Employees.

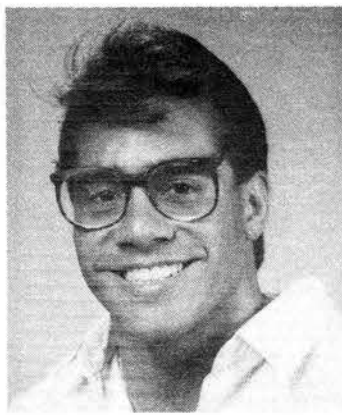
	Earnings Factors July
<i>SPSE (Savings Plan for Salaried Employees)</i>	
AT&T Shares	1.1562
Government Obligations	1.0046
Equity Portfolio	1.0479
Guaranteed Interest Fund	1.0077
Diversified Telephone Portfolio	
Unrealized Appreciation	1.0333
Realized Appreciation	.0049*
<i>SSP (Savings and Security Plan — Non-Salaried Employees)</i>	
AT&T Shares	1.1563
Guaranteed Interest Fund	1.0078
Diversified Telephone Portfolio	
Unrealized Appreciation	1.0325
Realized Appreciation	.0049*

* The 1 has been removed from the earnings factor. Current month's DTP earnings may be calculated directly: Earnings Factor x DTP Current Worth = Current Month's Earnings.

MILEPOSTS

LAB NEWS

SEPTEMBER 1987



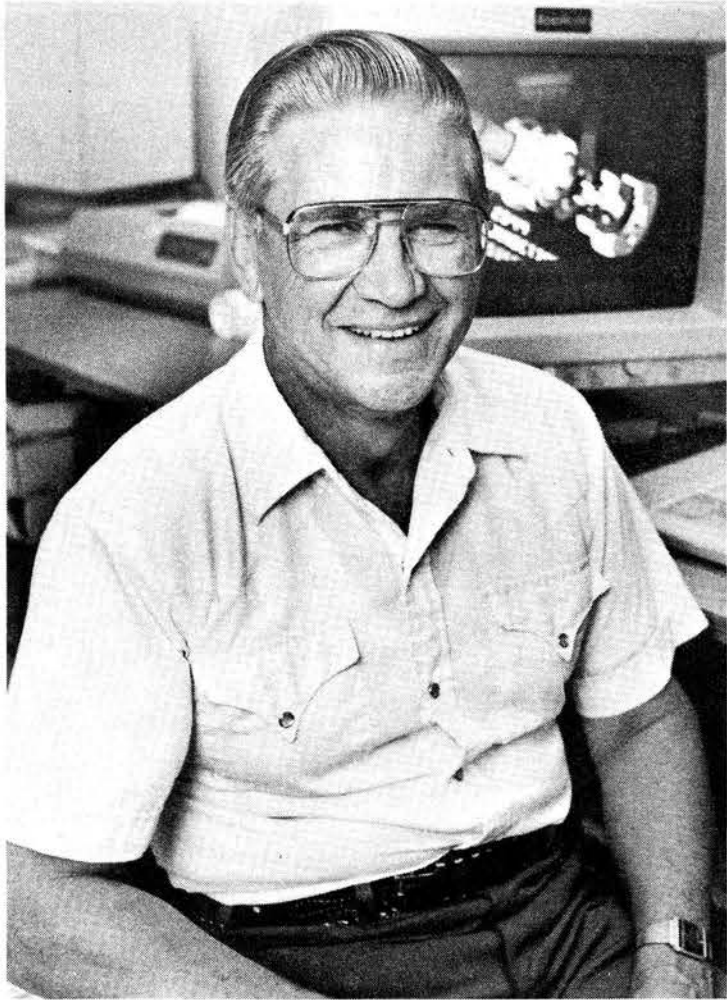
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Willie Doyeto (7812) 10



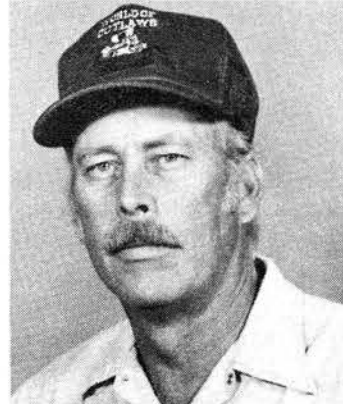
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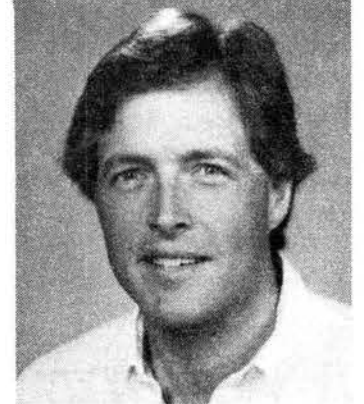
Ed Machin (2544) 35



Suzanne Follett (8236) 10



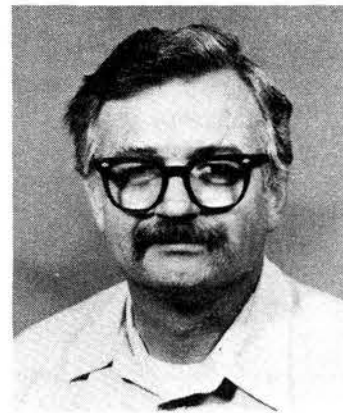
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Bill Rorke (8131) 10



Ray Rychnovsky (8152) 30



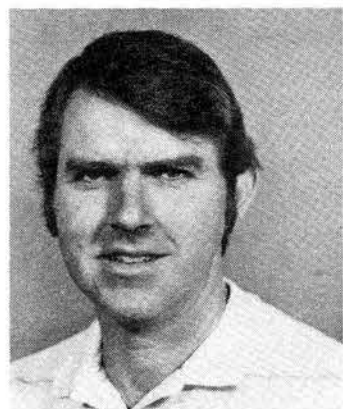
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Dorothy Stronach (3735) 10



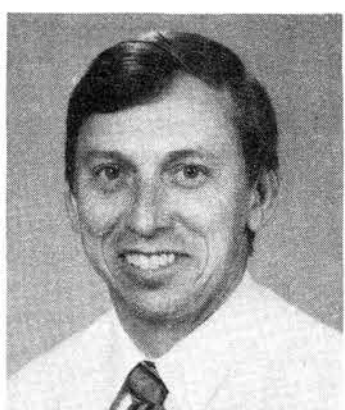
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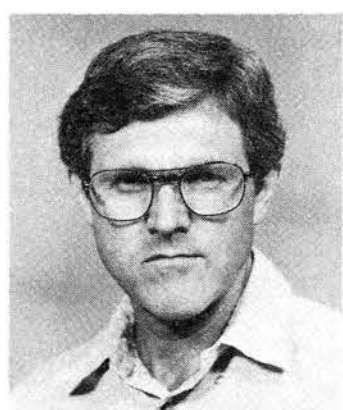
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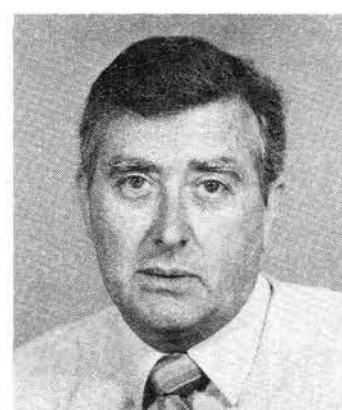
Ron Zotnick (7262) 30



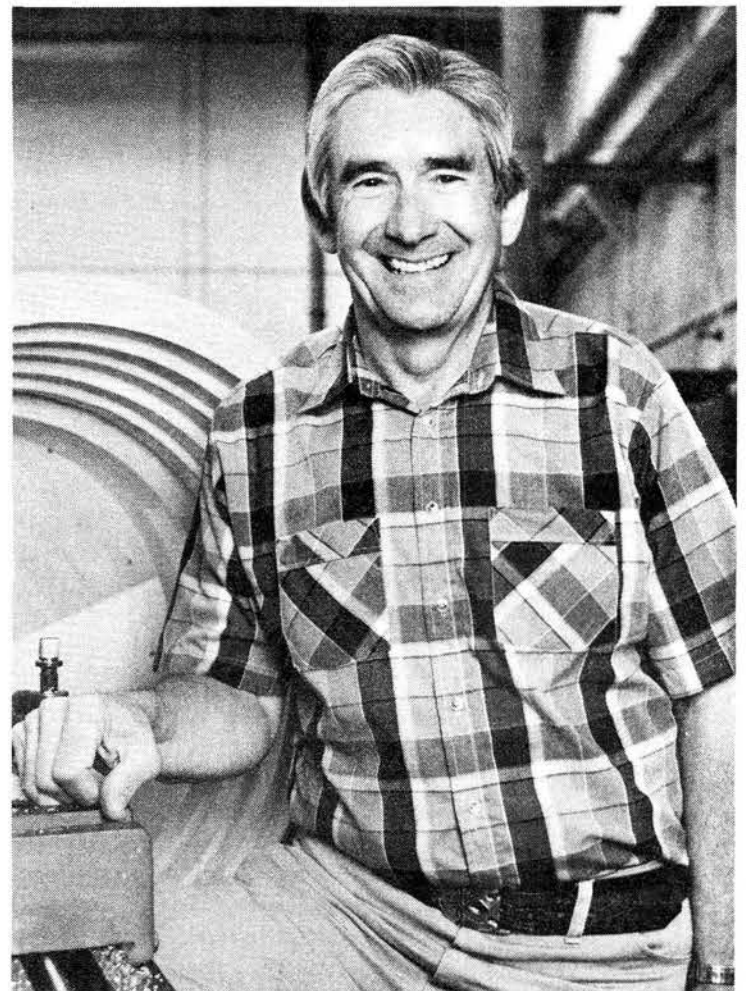
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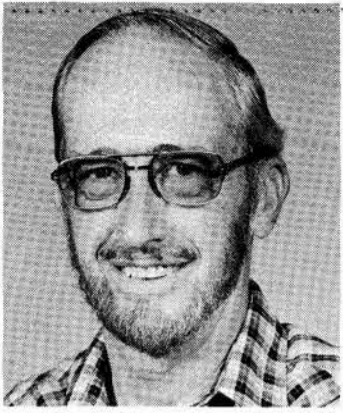
James Hubbs (1144) 15



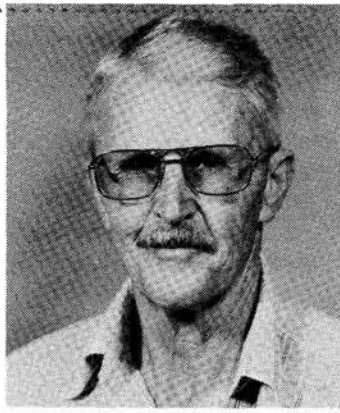
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Wayne Cyrus (7473) 35



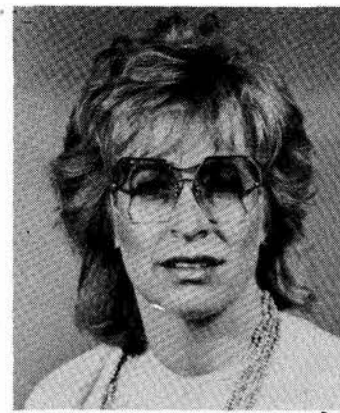
Fred Deiber (2852) 40



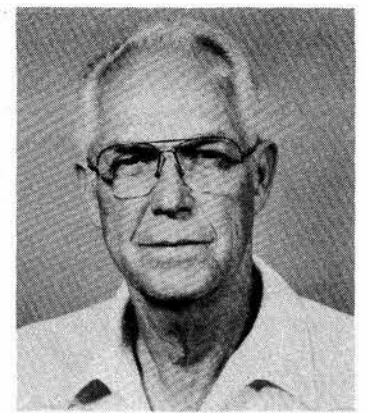
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Tim Taylor (9211) 20



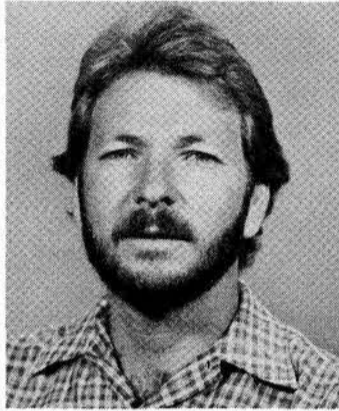
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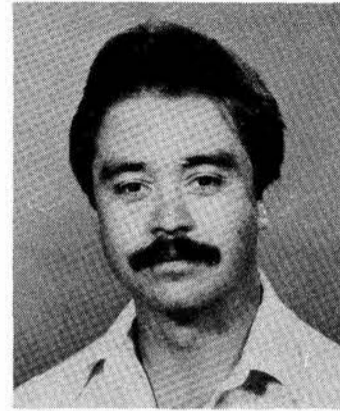
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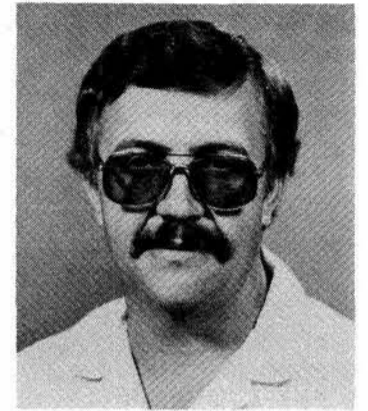
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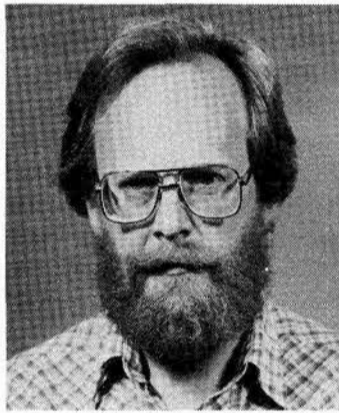
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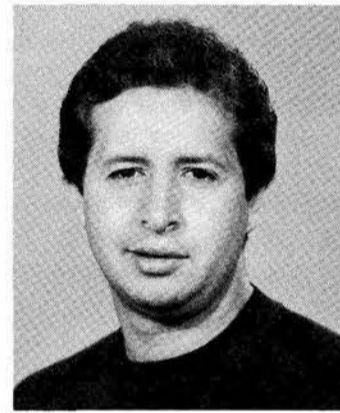
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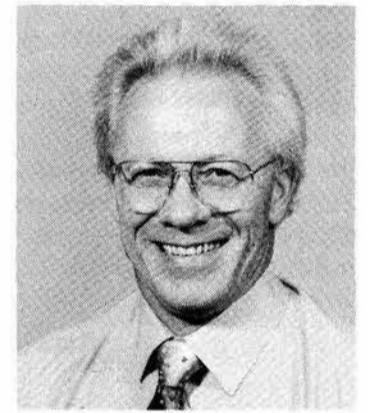
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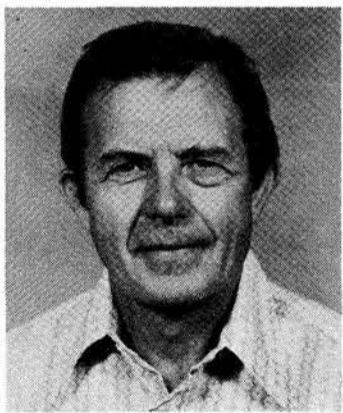
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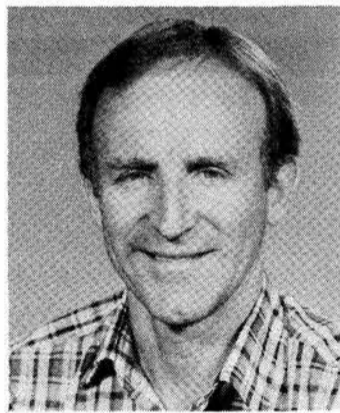
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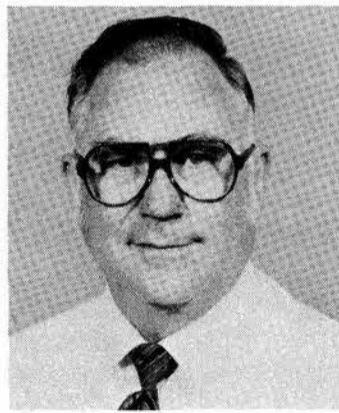
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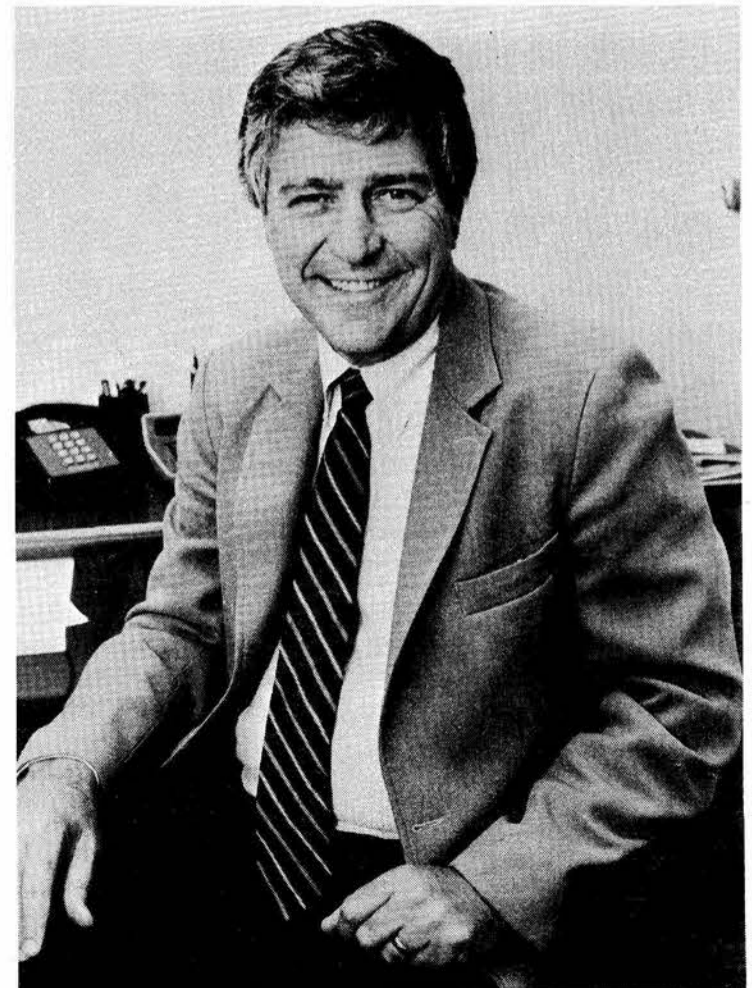
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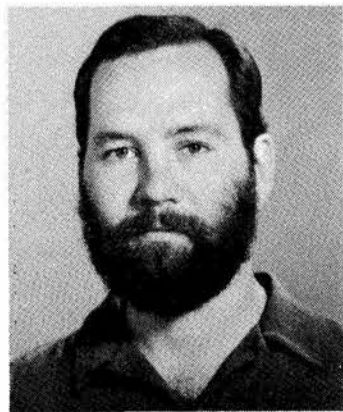
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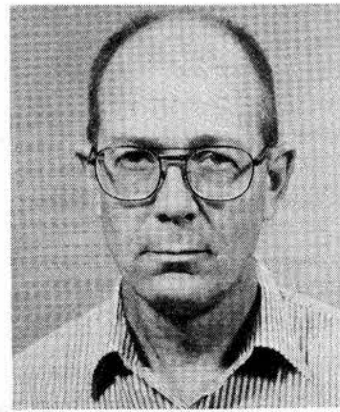
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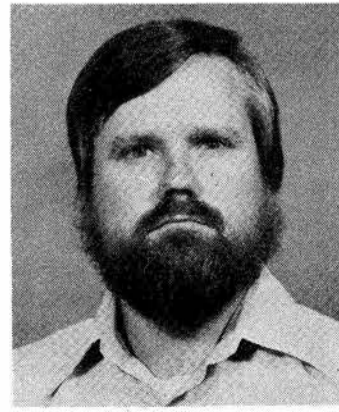
Jon Bedingfield (3731) 15



Dennis Dunn (7485) 10



Gary Snow (7411) 20



Robert Connell (2313) 10

Deadline: Friday noon before week of publication unless changed by holiday. Mail to Div. 3162.

Ad Rules

1. Limit 20 words, including last name and home phone.
2. Include organization and full name with each ad submission.
3. Submit each ad in writing. No phone-ins.
4. Use 8 1/2 by 11-inch paper.
5. Use separate sheet for each ad category.
6. Type or print ads legibly; use only accepted abbreviations.
7. One ad per category per issue.
8. No more than two insertions of same ad.
9. No "For Rent" ads except for employees on temporary assignment.
10. No commercial ads.
11. For active and retired Sandians and DOE employees.
12. Housing listed for sale is available for occupancy without regard to race, creed, color, or national origin.

MISCELLANEOUS

GE REFRIGERATOR/FREEZER, 17-cu.-ft., w/ice maker, \$200. Negin, 266-1983.

KING-SIZE MATTRESS AND BOX SPRING, \$300; solid hickory headboard, \$300; linens and bedspread; 7' green corduroy couch, steel frame, \$250. Folley, 266-1983.

CHAIN-LINK FENCING, 4' high, 25'-30' long, w/posts, man-gate, all hardware, \$25 OBO. Wilson, 293-9783.

BOY'S SOCCER SHOES, black, size 5-1/2, \$4; boy's Nike hiking shoes, size 5-1/2, \$10; Bundy clarinet, w/case, \$250. Berry, 821-7690.

DOUBLE SINK; 4' fluorescent light; kitchen light fixture; 1"-wide white plastic, 20' long; 14" rims. Long, 294-4591.

CHILD'S DOWN SLEEPING BAG, Eddie Bauer, \$65. Caskey, 294-3218.

CHAIN SAW, Sears Craftsman, 16", 3.1-cu.-in., gas, solid-state ignition, never used, was \$260, sell for \$175. Schmidt, 867-5989.

SILVER CORNET, w/case and 2 mouthpieces, \$250 OBO. Nation, 884-7013 between 9 & 12 Mon.-Fri.

THREE-WAY RECLINER, w/heater/vibrator, brown vinyl, \$100; upholstered occasional chair, high back, green, \$25. Norris, 864-7959.

STUDENT CLARINET, w/new ligature, mouthpiece, and reed case, \$250; Conn student oboe, \$250. Owyong, 294-1884.

OAK COMPUTER DESK/PRINTER STAND; sewing machine/cabinet; decorative rugs; upholstered chairs; walnut end tables; contemporary lamps; best offer. Witek, 296-5198.

UPHOLSTERY SEWING MACHINE, \$400, will consider trade for firewood. Smith, 384-5182.

COCKER SPANIEL PUP, female, black & white, 5 mos. old, has shots and papers, \$125. Sturgeon, 281-9035.

SABRE SAW, Sears Craftsman 17215, variable speed, 0-3200 strokes/min., double-insulated, 45-degree tilt base, 16 unused blades, \$30. Schkade, 292-5126.

LIVING ROOM COUCH, contemporary Kroehler, blue tweed, \$100. Woods, 884-4224.

COUCH, LOVESEAT, CHAIR, earth-tone, wood and fabric, knock down to convenient pieces, \$100. Maish, 292-5885.

PONY, for small beginning rider; 36" pipe wrench. Hamilton, 869-2718.

SOFA SLEEPER, \$25; 2 upholstered chairs, \$5/ea. Pletta, 281-4277.

IBM MONOCHROME MONITOR, \$185; woman's ski boots, size 7-1/2, \$25; Kaestle skis, 165mm, \$60; exercycle, \$35. Jones, 298-3267.

DISHWASHER, large-load capacity. Johnson, 296-1917.

CHEST FREEZER, Sears, 21-cu.-ft., \$200; wrought iron chandelier, \$25; 2 wrought iron light fixtures, \$10/ea. Trelue, 292-7369.

FREE FERTILIZER, composted horse manure, you dig. Moore, 345-4030.

.38-CAL. RELOADING EQUIPMENT: Lee loader, holders, powder, bullets, brass, 100 rounds, \$50. Ginn, 883-0004.

COUCH, 9', light green, four cushions, \$375 OBO. Robb, 821-2999.

SKIS: K2 180s w/ski tote, \$100; woman's Lange boots, size 6-1/2, \$75.

Ayers, 291-8216 after 1:30 p.m.

PRECOR ROWING MACHINE, \$150; new glass fireplace doors, \$50; Top Flite bike rollers, \$50; GE portable dishwasher, \$30. Stuart, 265-7315.

SKI BOOTS, Nordica 720, men's size 9, new, never used, \$90; boot for Chev. truck, new, \$15. Quintana, 898-6718.

VIDEO EDITOR, Panasonic NV8500, VHS, Dolby, cost \$3000, sell for \$900 OBO. Scott, 281-4332 after 6.

SONY PORTABLE CD PLAYER, D-3, & accessories, \$175; Precor 612E rowing machine, \$225; Sony Trinitron, 26", w/stereo speakers. Lloyd, 822-8567.

TROMBONE, Getzen, \$225. Carson, 292-5553.

WEBER GRILL, 22" dia., w/extra roasting rack, \$28. Doughty, 296-4142.

352 CLEVELAND ENGINE, \$250; rower exerciser, Sears, \$65. Sanchez, 831-2645.

YORKSHIRE TERRIER PUPPIES, 2 females, 1 male, AKC-registered, championship background. Thompson, 892-2875.

WHITE PROVINCIAL BEDROOM SET: full-size canopy, mattress, box spring, chest of drawers, night stand, \$300. Espinoza, 883-9629.

SKI PACKAGE: woman's boots, small; Rossignol skis w/soles, \$75/all. Marchi, 291-9681.

AMEREC 610 ROWING MACHINE, \$175; Pro Advantage exercise bicycle, similar to Tunturi Executive Ergometer, \$35 OBO. McCormack, 296-3936.

TABLE SAW, Craftsman, 8", w/cast iron table and extension wing, 4" Craftsman jointer, \$185/both OBO. Schneider, 299-6243.

LEXINGTON UPRIGHT PIANO, w/bench, \$395. Coalson, 298-0061.

NORITAKE CHINA, 62-piece service for 8, \$125; 24-piece stemware set, \$20; 2 antique oak chairs, make offer. Krahling, 268-8126.

AKC CHINESE PUGS, champion blood lines, have shots, both fawn and black, \$250 or will barter. Hilton, 898-6711.

GIRL'S CLOTHING, sizes 10-14, fall & winter. Pompeo, 298-0731.

WASHING MACHINE MOTOR, for Whirlpool or Kenmore, 2-spdl., in unopened box, \$50. Douglas, 281-9843.

ATOMIC TELEMAR SKIS, 205cm, metal tip/tail, \$220/new, asking \$95. Blake, 881-1663.

LABRADOR RETRIEVER PUPS, AKC, yellow, females & males, shots, wormed, dew claws removed, champion bloodline, parents OFA-certified, ready Oct. 5, \$250. Bendure, 298-4763.

FLUTE, Artley, B-flat, w/case, \$150. Stomp, 298-3824.

OAK KITCHEN TABLE, w/4 ladder-back chairs, \$100; 1920s walnut buffet, appraised at \$500, asking \$200. Rejent, 299-1518.

ONE-TON OPEN TRAILER, w/ramp gate, high sides, rigged for 2 horses or general hauling. Asprey, 296-6673.

MARQUETTE FREEZER, \$100; loveseat and couch, \$150; full cab-over camper, \$500; OBO on all items. Guay, 281-3891.

CEILING LIGHT, oak trim, glass insert, new, \$10. Hovorka, 299-0224 leave message.

WOODEN STORAGE CHEST, \$25; exercycle, \$25; hide-a-bed, \$100; 2 chairs, \$15/ea.; parts for '66 Olds 88. Prevender, 296-8586.

FULL-SIZE VIOLIN, Anton Becker copy of Stradivarius, w/bows & case, \$400. Lee, 296-3317.

PEPSI MACHINE, coin-operated, dispenses bottles, \$250. Martegane, 884-4643.

PILGRIM COFFEE SET, 4-piece, silver-plated, \$20; Samsonite Concord luggage, 2 pieces, \$40 OBO. Lewin, 898-2303.

FRENCH HORN, Holton F double, \$800; tires: one 950x16.5 M/5, w/rim; one 750x16, w/rim, fits Ford 8-lug; \$50/ea. Wright, 296-3850.

WEIGHT SET, bench press, \$30; 140 lbs. free weights, \$20; Western wood tunnel concave water ski, \$15. Harris, 268-4432.

WASHING MACHINE, \$50; portable dishwasher, \$250; microwave, \$50; room air conditioner, \$75; 2 electric typewriters, \$75/ea. Croessmann, 843-7340.

YAMAHA FLUTE, \$140. Kjeldgaard, 268-8835.

GUITAR (AUDIO) AMPLIFIER, tube-type, dual inputs, 8" speaker, 15-watt, 1 w/naugahyde cover, 1 plain wood, \$50/ea. Hughes, 299-6674.

SEARS HILLARY TENT, 10' x 13', sleeps 6, used twice, \$175; Vivitar camera tripod, w/case, \$40. Go-lightly, 293-5987.

GOLD WEDDING RING SET, 3-piece, 5 diamonds per ring, never worn, \$1750 OBO. Rudolph, 298-0941.

MATTRESSES AND BOX SPRINGS, Sealy Posturepedic, twin-size, 2 sets, \$25/set. Dunlap, 884-0232.

FARBERWARE CONVECTION/DEHYDRATER OVEN, \$80; exercise bike, \$70; TRS-80 computer, \$40. Brunacini, 345-4811.

UTILITY TRAILER, 5' x 8', enclosed, \$1200 OBO. Archibeque, 255-4094.

DOGHOUSE, small/medium, electrically heated floor pad, hinged roof, \$60. Perrine, 293-1429.

PIONEER CASSETTE TAPE DECK, Dolby, hi & normal bias, model CT-F91, \$60. Smith, 281-9360.

CRAFTSMAN JOINTER-PLANER, 4-1/8", w/stand & casters, \$100. Nelson, 298-0720.

SOFA, 2-cushion, \$75; rocking loveseat, \$40; recliner, \$45; maple student desk, \$20; 2 maple end tables, \$30; table lamps, \$10-\$15. Hoke, 298-6619.

POWERMATIC DRILL PRESS; Powermatic 6-in. jointer; Rockwell wood-turning lathe. James, 294-6837.

NURSERY FURNITURE and accessories, more furniture, moving sale, 833 Cagua SE, Sept. 26. McCoin, 255-0598.

KITCHEN TABLE, 36" x 47", w/12" leaf, 4 upholstered swivel chairs, \$75. Knapp, 294-6359.

CHILD'S HIGH CHAIR, \$20; rocking horse, \$15; hardwood rocker, \$20; white wooden crib, \$35; Gerry backpack child carrier, \$5. Reid, 268-6506.

SOFA SLEEPER, Simmons queen-size innerspring, brown floral pattern, throw pillows, \$200. Beckmann, 296-1829.

KING-SIZE WATER BED, w/solid wood frame, heater, \$60. Copus, 293-5209.

BABY SWING/CARRIER COMBO, Graco, new, \$25; 55-gal. drum, \$3; 110-VAC welder, Sears, \$60; misc. furniture. Falacy, 293-2517.

TRI-AMPED STEREO SPEAKERS, homemade, \$100/pair, amps and all. Strip, 292-7490.

FREE KINDLING, some small logs, all fruit wood, uncut, you haul; Keeshond X female, 8 months old, 25 lbs., house-broken, spayed, all shots, some obedience training, \$50. Vargo, 294-8226.

CARPET, rust color, 30 sq. ft., \$30; queen-size hide-a-bed, green/gold tweed, \$95 OBO. Freshour, 256-9168 after 5.

TRANSPORTATION

'79 ALFA ROMEO SPYDER, convertible, black w/tan interior, 46K miles, \$4500; '73 Yamaha YZ 250K, \$1000. Gomez, 298-9132.

'85 FORD BRONCO XLT, full-size, 4-spdl., 6-cyl., 300 CID, PS, PB, 30K miles, \$10,000 OBO. Dwyer, 291-8466.

'77 MONTE CARLO, AT, AC, power, AM/FM cassette. Daut, 255-2529, 881-6291, or 243-0852 evenings.

'76 VW BUG, fuel-injection, tow bar, front cover, \$2175; 5 tires, 10-15, 6-ply rating. Hamilton, 869-2718.

'65 FORD MUSTANG, red, 2-dr., hardtop, 6-cyl., AT, \$2500. Tidmore, 884-1870.

'80 FORD MUSTANG, 4-spdl., AC, \$2300. Shepherd, 296-1238 evenings.

'83 CITATION, 2-dr., hatchback, V-6, one owner, loaded with options, new tires, \$2200. Sturgeon, 281-9035.

'8 ALASKAN CABOVER CAMPER, \$1800; '74 F-350 Supercab Ford truck, \$2000. Klafke, 869-6877.

'80 CHEV. MONZA, red, standard transmission, new tires, AM/FM cassette, \$1200 OBO. Hoven, 281-4114.

'81 JEEP CJ-7 RENEGADE, \$4750 OBO. Marshall, 281-5821.

'83 GMC SUBURBAN, 6.2L diesel, AC, AT, stereo/tape, Sierra package, 20 mpg/town, 26 mpg/highway. Swanson, 884-8650.

'84 MacGREGOR 21 SAILBOAT, trail-

er, motor, main, jib, Genoa, porta-potty, \$4995. Jacklin, 298-3046.

'84 CHEV. VAN, model 20, 30K miles, conversions new, PS, PB, AT, AC, AM/FM cassette, steel radials, \$11,500. Patrick, 265-4569.

'67 PONTIAC TEMPEST, 326, 3-spdl., 97K miles, \$1500 OBO. Chavez, 836-2719.

'84 SLIDE-IN CAMPER, self-contained; with or without '72 Chev. pickup, 350 V-8. Nelson, 865-9516.

'69 DODGE CORONET WAGON, 318 V-8, AT, AC, PS, power rear window, body & interior rough, make offer. Aeschliman, 281-1227.

'64 FORD SW, engine needs new flywheel to run, you tow, \$100 OBO. Zurzulo, 898-1175.

'73 VOLVO 142, fuel-injection, 4-wheel disc brakes. Edgar, 294-3073.

'72 PONTIAC GTO, original owner, 91K miles, \$4500. Grosbier, 821-0314.

'76 HONDA 400F, 4-cyl., 10K miles, \$550 OBO. Griego, 897-1668.

'78 FORD LTD, 4-dr., PS, PB, AT, AC, AM radio, new tires, 50K miles, \$1800. King, 299-8768.

MOUNTAIN BIKE, Bianchi Cervino, black, 21", \$250. Lloyd, 822-8567.

'82 MAZDA RX-7 GSL, PS, PB, 5-spdl., sunroof, AM/FM stereo, extras, \$6742. Simmons, 299-3823.

'86 NISSAN SENTRA, AT, AC, AM/FM, \$5500. Marek, 265-9247.

'82 YAMAHA XT 200, 2 ea., street-legal, \$550/ea. Archuleta, 296-7244.

'49 DODGE CORONET, \$1700 OBO. Sanchez, 831-2645.

'86 CORVETTE COUPE, silver beige, 4-spdl., Z-51, all options, \$21,000. Ahr, 823-9252.

'70 MUSTANG GRANDE, AT, AC, PS, PB, 10K miles on new engine. Ferguson, 293-2853.

'78 FORD COURIER PICKUP, w/cab-high shell, 67K miles, 22 mpg/city, 2.3L engine, \$1800. Haaker, 293-1077.

'86 SUZUKI SAMURAI JEEP, custom, hardtop & softtop, \$7000 OBO. Taro, 281-2478 or 299-4661.

'86 DODGE VAN, Royal SE, 8-passenger, 360 V-8, front and rear AC, AM/FM tape, tilt, cruise, power doors & windows, custom wheels, AT, 23K miles, \$12,000. Cockerham, 892-6927.

'80 CHEVETTE, 2-dr., AC, 68K miles, \$900. Pompeo, 298-0731.

'75 FORD ELITE, \$900. Burkhardt, 255-7144.

HONDA CB400T, blue w/white Windjammer and saddlebags, chrome crash bars and bag rack. Martinez, 821-6096.

'80 MAZDA B-2000 SUNDOWNER PICKUP, long bed, 55K miles, AM/FM cassette, \$1500. Tipton, 298-1944.

RED SHOGUN MOUNTAIN BIKE, cost \$325, sell for \$225 or trade for 26/27" racing 10-spdl. bike. Asprey, 296-6673.

'79 BUICK SKYHAWK, AC, AT, needs some repair, \$500 OBO. Guay, 281-3891.

'73 CUTLASS, rebuilt transmission, new battery, radiator, maintenance records, \$750 OBO. Atkins, 298-5762.

'77 CHEV. BLAZER, 350 V-8, 4-WD, AT, PS, PB, AC, \$3300. Parks, 884-7475.

'82 BUICK LeSABRE, \$4000. Randle, 867-4831.

'84 TOYOTA SR-5, 4x4, 5-spdl., AC, PS, AM/FM w/equalizer, sunroof, camper shell, \$6300. Bryant, 256-1110.

SCHWINN SPORTS TOURER, chrome moly frame, 700c, stock wheels, 23-1/2", \$140; Diamondback BMX bike, \$110. Healer, 298-6967.

'77 KAWASAKI KZ 400, street bike, \$375 OBO. Henfling, 298-0596.

'77 CHEV. LUV PICKUP, yellow, rebuilt engine, \$800. McGuire, 296-9007 evenings.

'87 DODGE OMNI, 5-spdl., AC, cruise, AM/FM stereo, 12K miles, rear defrost, \$6500 OBO. Herr, 294-5836.

'79 DODGE ASPEN, 2-dr., AT, power, AM/FM cassette, 66K miles, \$1750 OBO. Brow, 294-3526.

'65 CHEV. NOVA II, 4-dr., needs body and interior work, price negotiable. Go-lightly, 293-5987 after 6.

'86 SUZUKI SAMURAI JX, ragtop, 5.5K miles, \$6900. Littleton, 299-7467.

'82 TRIUMPH BONNEVILLE ROYAL, 6K miles, \$1000. Strait, 842-1695.

'79 DATSUN 200SX, 5-spdl., AC, rear defrost, AM/FM cassette, 64K miles, \$2000 OBO. Goldberger, 828-0442.

'83 CHEV. SCOTTSDALE PICKUP, 4-

WD, 4-spdl., AC, PS, dual tanks, matching camper shell, 24K miles. Falacy, 293-2517.

'78 OLDS DELTA 88, 4-dr., AC, AT, PW, PL, PB, PS, \$1500 OBO. Boverie, 255-1071.

'79 OLDS 98R, 51K miles, loaded, \$500 towing package, \$2300 OBO; '74 VW Bug, \$1400 OBO. Gilliland, 296-6930.

'79 JEEP CHEROKEE-S, AT, PS, PB, AM/FM cassette, \$3900 OBO. Williams, 292-1210.

REAL ESTATE

3-BDR. HOME, corner lot, east of Tramway between Lomas and Copper, 1-3/4 baths, 1475 sq. ft., 2-car garage, pitched roof, brick front, 10 yrs. old, \$95,000. Hinkel, 298-8226.

10 ACRES, 7 miles south of Moriarty, near power, gas, and phone, \$15,000. Smith, 384-5182.

STUDENT HOME in Portales, close to university, appliances, owner financing, monthly payment \$129 w/\$1800 down. Snelling, 294-5751.

2-BDR. MOBILE HOME, '81 Windsor, 14' x 80', 2 baths, in Wyoming Plaza adult park, approx. .5 mile to Wyoming gate, extras. Fjelseth, 296-3076.

3-BDR. HOME, Holiday Park, 1493 sq. ft., 1-1/2 baths, FP, landscaped, new carpet, \$84,900. Romero, 828-1605.

3-BDR. MOBILE HOME, American, 12' x 65', in adult park, 1-3/4 baths, stove, refrigerator, washer/dryer, dishwasher, disposal, new carpeting, \$10,500. Thomas, 296-4368.

5-BDR. HOUSE, 2408 sq. ft., 3 baths, wet bar/rec. room, full basement, Juan Tabo/Menaul, Eldorado school district, fruit/shade trees, \$89,900. Asprey, 296-6673.

3-BDR. HOME, 2000 sq. ft., Sandia area, FP, double garage. Kopp, 828-1587.

ANGEL FIRE CABIN SHARE, Week 52 (Dec. 26-Jan. 2), sleeps 6-8, fully furnished, \$9900. Cover, 299-5015.

3-BDR. PATIO HOME, Altamira NE, 1-3/4 baths, finished double garage w/opener, privacy wall, landscaping, covered patio, assumable 9.5% VA, \$95,000. Hofherr, 293-7830.

HOUSE, Lomas/Morris area, near schools, gingerbread style, 9.5% FHA assumable, low down, \$65,000. Thomas, 293-0681.

WANTED

THE "TASTY POSTER." Carter, 275-8376.

'79 TO '82 3-DR. HATCHBACK, Subaru, Honda, Toyota, etc. McConahy, 884-5071.

BABYSITTER for 14-mo.-old, in my home, Mon.-Fri., 12-4 p.m., Carlisle & Comanche area. Nation, 884-7013.

HOUSEMATE, female, nonsmoker, share house in NE Heights, \$275 plus utilities, furniture not necessary. Marquez, 292-5886.

TYPEWRITER and stand, good reliable electric. Tomek, 299-0471.

COMMODORE 64 PC system w/disk drives. McGuckin, 299-1342.

THREE-SPD. ADULT TRICYCLE, for older woman, must be lightweight and transportable. Brion, 298-1761.

ROTOTILLER (rear), good condition, 3-1/3- to 6-hp motor. Hultine, 891-9518.

BROOKLYN TECHNICAL HIGH SCHOOL GRADUATES, contact me for information on the NM chapter of the alumni association. Liguori, 256-3613.

'76-'79 FORD F250 4-wheel drive pickup in excellent condition, will pay fair price for right vehicle. Ruminski, 268-3811.

5-GAL. PROPANE TANK, in good condition, w/good valves. Hovorka, 299-0224 leave message.

HOUSEMATE, female or male, to rent furnished room w/bath, Juan Tabo/Central, share laundry, kitchen, \$225/mo. plus 1/2 utilities. Lambert, 294-4188.

LARGE FLAT-BED TRAILER capable of hauling 2800-lb. vehicle at highway speeds, rent or buy. Schamaun, 298-5192.

SHARE-A-RIDE

VANPOOL from Edgewood and Highway 217 has openings for new riders. Hansche, 281-5623.

Membership Has Its Privileges: Oct. 1 Brings a Bunch More

A GOOD DEAL is what C-Club membership's always been — ask any member. Starting Oct. 1, the deal gets even better. Flash the membership card and get discounts on both Friday night two-for-one dinners and Sunday brunches (\$1 off per family member with a \$2/family limit; singles may include one guest as "family"). The lunch bunch benefits too; members can take 10 percent off the cost of their noontime eats if the price totals \$2.50 or more (not including tax). Also, as of Oct. 1, guest fees are no more — except for Friday night events after 8 p.m. So . . . if you're a card-carrying member, you can laugh all the way to the bank!

SOUTH SIDE (*not* of Chicago) provides variety dance music tonight from 8 p.m. to midnight, right after the two-for-one special dinner (prime rib or snow crab, your choice of two entrees for \$14.95). If you've not made that dinner reservation yet, better shake a leg (or a touch-tone finger); call 265-6791.

FAMILY/VARIETY NIGHT on Saturday, Oct. 3, promises much fun for everybody. The low-cost buffet, served from 5 to 6:30 p.m., features all kinds of kid-pleasin' stuff: pizza, hot dogs, etc. A side-splitting Disney movie, "The Parent Trap," lights up the big screen at 6. As usual, the flick is free.

A HARVEST HOEDOWN'S on tap for El Rancho C-Club next Friday night, Oct. 2. Everybody's favorite, those good old Poor Boys from Isleta, unleash their inimitable whoop-de-doo tunes from 8:30 p.m. to 12:30 a.m. Beforehand, enjoy the two-for-one special featuring filet mignon or snow crab (pretty elegant chuck wagon dining, we'd say). As usual on the first Friday night of the month, you can hone your stomp skills at free c/w dance lessons from 7:30 to 8:30. The Isletans always draw a big crowd, so it might not be a bad idea to call in that dinner reservation right now.

SOME FIRST-CLASS FOLKS were elected members of the Board of Directors at the annual meeting on Sept. 14. Elected to two-year terms were Ed Neidel (ret.), Dick Fairbanks (3521), Mike O'Bryant (2858), and Steve Ross (3438). Phyllis Padilla (3521), Jack Mortley (7521), and Anna Bachicha (DOE) will serve one-year terms. Joining them on the Board will be Alice Maese (132), Mark Kiefer (1265), Ken Sorenson (6322), and Marlene Smith (7260), who have one year remaining on their two-year terms. With this gang in charge, it ought to be a super year!

THEY KNOW A GOOD THING when they see it. Because T-Bird card sharks are having such a blast at those shuffle-and-deal sessions, they're getting together three times next month: Oct. 1, 15, and 29. Gaming starts at 10:30 a.m. all three days. As usual, free cookies, coffee, and door prizes accompany the fast and furious card games.

CELEBRATE OCTOBERFEST — Duke City style — two weeks from tonight (Oct. 9). Start out the evening with the two-for-one special — prime rib or scallops (what, no *sauerkraut*?). Then watch a rousing floor show by the colorfully costumed Edelweiss Folk Dancers from 7:30 to 8 p.m. Next, it's swing-'n-sway time to the Big Band sounds of Don Lesmen and his group from 8 to 11:30. This is an evening you won't want to miss, so circle the date on your calendar. Better still, call the reservations people immediately, if not sooner.

THE BEST BRUNCH BARGAIN in town is back again on Sunday, Oct. 11, from 10 a.m. to 2 p.m. For just \$5.95 (\$3 for children from 4 to 11 and free for tots under 4), you can load up on fantastic food: French toast, cheese omelets, bacon, fried potatoes, salsa, baron of beef, turkey, fried fish, green



HOT OFF THE GRILL — Chef Henry Perez (left) and Manager Sal Salas try out the brand-new broiler in the C-Club kitchen. Friday night dinner steaks will be juicier than ever, thanks to the new addition (installed a couple of weeks ago.)

beans almondine, tossed salad, a delicious dessert assortment, and a variety of beverages — juices, coffee, tea, and milk. Remember, your membership card is good for a \$1 discount (limit: \$2/family).

THUNDERBIRDS, TAKE NOTE — Come out for the monthly lunch/program session on Monday, Oct. 12, at the south end of the ballroom. Plan to eat about noon; then stick around for a program (1 p.m.) presented by Nick & Pat DeLollis and Roy & Betty Stradford on their Elder Hostel experiences. Elder Hostel, a year-round program for retirees 60 and older, provides travel opportunities and college program participation (in a dozen countries) at very reasonable cost. After the program, plan to attend the meeting of the brand-new T-Bird Board.

ATTENTION, DART THROWERS — We told you a while back that the C-Club Dart League's fall competition was set to begin earlier this month. That date was off target, so it's back to the drawing (dart?) board. Signups for fall play are now scheduled for Tuesday, Oct. 13, at 5 p.m. in the ballroom. Once the paperwork is finished, compete in a blind-draw doubles tournament while you munch on free goodies. And honcho Sandra Swain (9243) assures us that fall competition really *will* start Tuesday, Oct. 20.

SOMEWHERE ALONG THE WAY you'll want to sign up for one (or more) of the tantalizing trips put together by the C-Club Travel Committee. Here's a sampling:

Hawaii — Have a passion for pineapples, papaya, and palm trees? If so, this adventure in the Islands

(Oct. 30-Nov. 9) is the one for you. You'll visit three islands — Oahu, Maui, and Kauai — with all sorts of optional ground tours available at each place. (An alternative: Write postcards to your envious friends as you loll away the time on a sandy beach just steps from your first-class hotel!) The \$989/person (double) cost covers RT air fare from Albuquerque, lei greeting in Honolulu, 10 nights' lodging, an authentic luau (Kauai), full American breakfast with ground options briefing in Honolulu, rental car per couple on Kauai and Maui, transfers, baggage handling, and more. Time's growing short, so sign up soon and plan to attend the pre-trip meeting on Oct. 14 at 7 p.m. in the dining room. Aloha!

Las Vegas — A trip to Sin City (Dec. 11-13) is just what you need to get in the holiday spirit. For \$169/person (double), you get round-trip air fare, two nights at the Four Queens Hotel, fun books for Vegas attractions, a discounted rental car, and much more. A \$50 deposit is due on Oct. 26; final payment on Nov. 16.

Disney World/Epcot Center — Here's a holiday family fling in sunny Florida (Dec. 26-Jan. 2) that has something for *everybody*: three days at Disney World/Epcot Center, a day at Sea World, a Medieval Times dinner show, a day at Cypress Gardens, and a tour of Cape Canaveral. The \$847/adult tab covers admissions for all of the above, five buffet breakfasts, seven nights' lodging at the Ramada Resort Maingate (Orlando), ground transportation, and RT air fare. Kids sharing a room with parents go for less: It's \$663 for those ages 12-17; \$618, ages 3-11. Make your reservations at the Club office for this or any of the other glorious getaways.



SCHOTTISHE, ANYONE? The Edelweiss Folk Dancers, members of the local German-American club, present a colorful floor show at Oktoberfest on Oct. 9. Afterward, Don Lesmen and crew provide golden oldies from the 40s and 50s for your dancing pleasure.